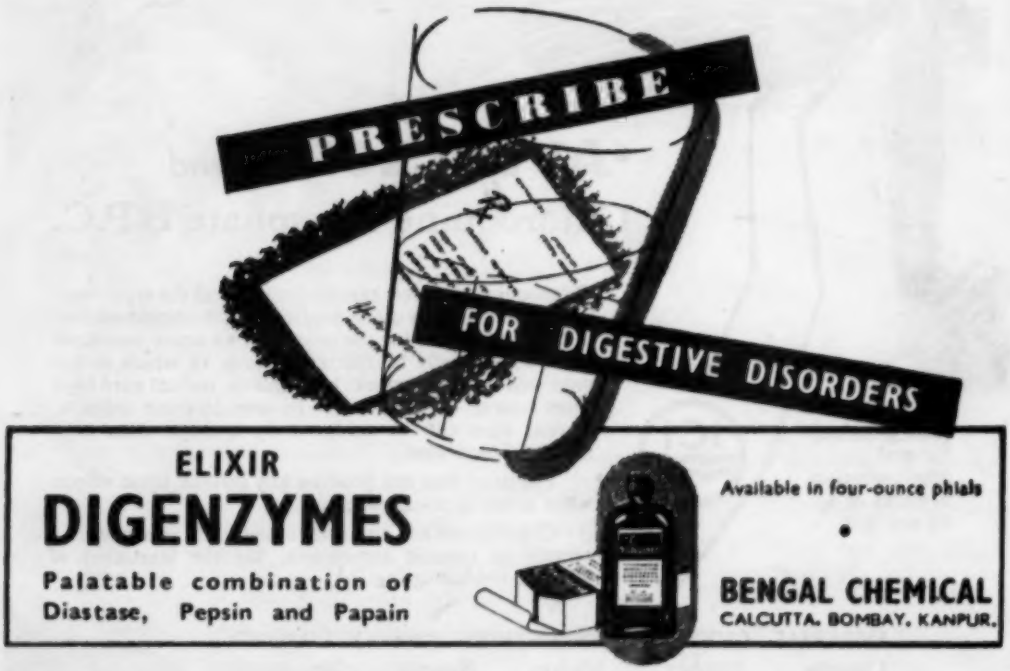
JOURNAL

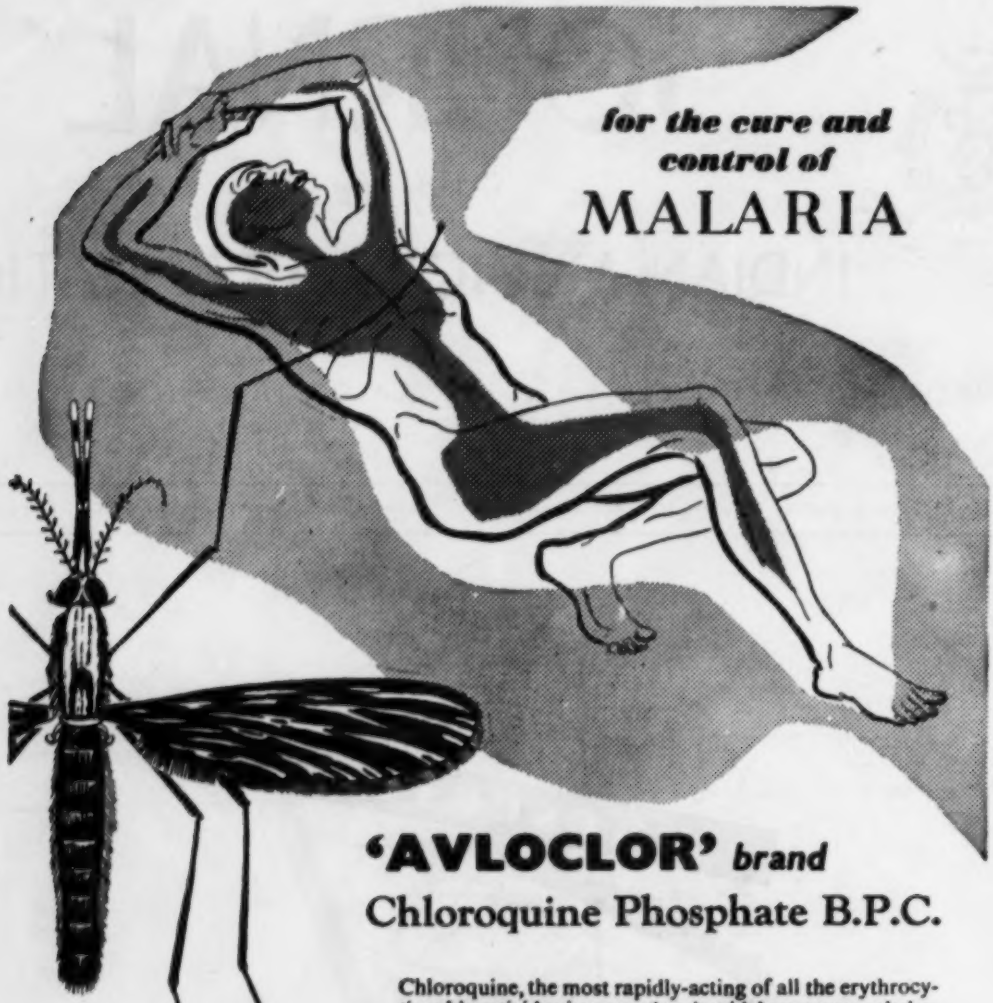
of the

INDIAN MEDICAL ASSOCIATION

VOLUME 25 NUMBER 4 CALCUTTA JULY 16, 1955

Published twice a month from 23, Samavaya Mansions, Calcutta 13. Annual Subscription : Inland Rs. 24/- Foreign Rs. 30/-





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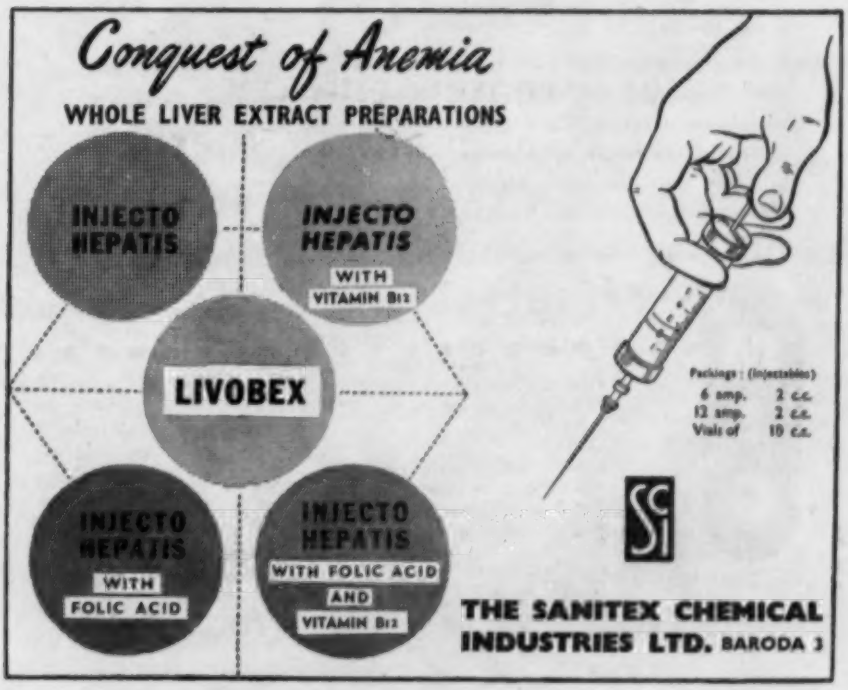
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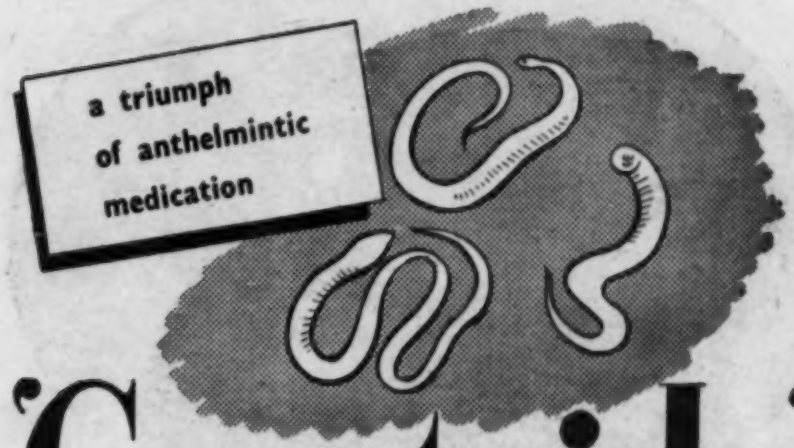

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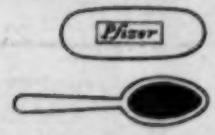

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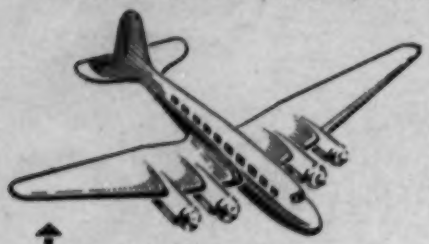

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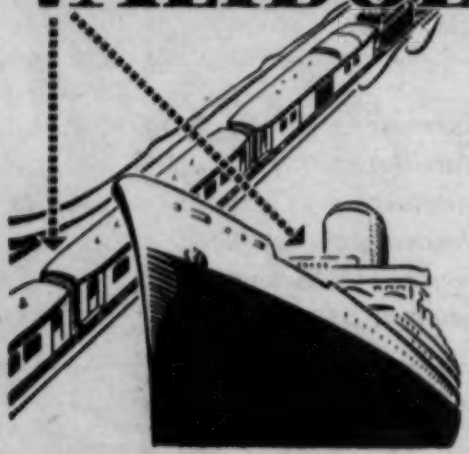

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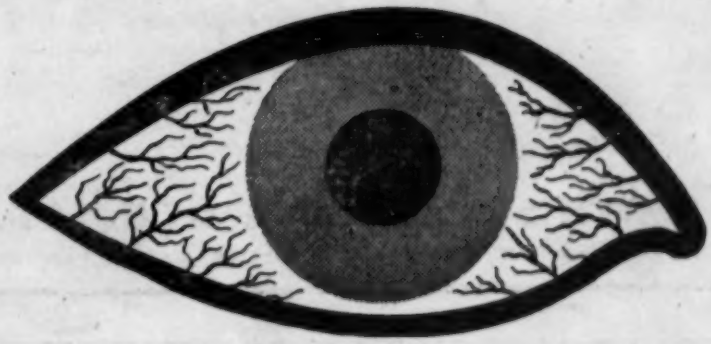

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- DURING PREGNANCY AND
- LACTATION.

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East India Pharmaceutical Works Ltd.
CALCUTTA–26.

Journal of the
Indian Medical Association

Vol. 25, No. 4 CALCUTTA July 16, 1955
PUBLISHED TWICE A MONTH

ORIGINAL ARTICLES

REINFECTION AND RELAPSE IN EARLY SYPHILIS

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Since the advent of chemotherapy with arsenicals and bismuth administered by the conventional method during the second, third and fourth decades of the present century, reports of reinfection in syphilis began to appear in the medical literature. Neisser from his experimental studies enunciated the concept that reinfection implied cure of the first infection and that refractoriness to reinfection implied persistence of the original infection. Based upon this concept, clinicians set up criteria of reinfection, of varying rigidity and stringency. Judged by applying the criteria to the so-called reported reinfections, very few cases could be declared as indubitable reinfections. In the meantime, the Neisserian concept was challenged and proved untrue by the later experimental studies of Kolle, Chesney, Brown and Pierce, and in recent years by Arnold, Mahoney and Cutler (1947), and Magnuson, Rosenau and Clark (1948). It has been shown that successful reinoculation can be carried out in rabbits cured early in the course of infection and that reinfection can occur in the rabbit soon after the first infection. With the advent of the rapid therapy of syphilis the old criteria of diagnosing reinfection seems to be no longer valid although ultra-conservative and cautious clinicians recognise the great difficulty of differentiating relapse from reinfection.

Moore (1943) in a masterly critical review of the various criteria for the diagnosis of reinfection, comes to the conclusion that the determination of the fact of reinfection in man and its differentiation from relapse must rest on clinical impressions and on a diagnostic 'hunch' rather than on certainty, although in another context, he recognises that the incidence of supposed reinfections, has increased tenfold since the advent of rapid therapy of syphilis.

In the nation-wide studies on penicillin treatment of syphilis in the United States, the Penicillin Panel, set up such a rigid criteria of cure that many clinicians felt that the results that were worked out in the central tabulating unit would not reflect the true value of penicillin in the treatment of syphilis. The recurrent episodes of syphilis after penicillin therapy were variously designated as 'treatment failures', 'retreatment rates', 'recurrent infectious episodes' and so on. Schoch (1952) and other investigators in America have rebelled against the non-possumus attitude of classifying relapse and reinfection as treatment failures and are of opinion that it is possible to differentiate reinfection from relapse, by careful epidemiological confrontation. They point out that there is enough clinical and experimental evidence to prove that symptomatic and asymptomatic reinfection can occur in human beings where the

first infection has been cured by rapid adequate arsenic-bismuth or penicillin therapy and that the present over-cautious attitude does less than scant justice to the curative power of penicillin in early syphilis. Schoch (1952) was the author of the term 'ping-pong' syphilis which has been recognised by syphilologists all over the world, and its occurrence is a distinctive feature of rapid therapy of early syphilis and almost unknown during the era of prolonged heavy metal therapy which protected the patients against their contacts until their infectious lesions spontaneously healed.

When rabbits and human beings are treated for early seropositive syphilis before the refractory state towards early lesions has become permanently established, reinfection may be followed by the development of early lesions before the serological tests for syphilis have become negative. In other words, syphilitic reagin does not protect against reinfection: After a permanent refractory state towards early lesions has been established, syphilis can be cured by treatment and reinfection may be possible without the development of early lesions.

According to the well reasoned contention of Schoch (*loc. cit.*), the reported 20 to 30 per cent failure rate in the treatment of early syphilis is fallacious and includes a large percentage of reinfection, a significant percentage of low titred positive serological reactors in the absence of clinical lesions and only a very small percentage (about 5 per cent) of true failures.

Merrill (1951) devised an objective statistical method to differentiate between relapses and reinfection. She in her study has shown that in the first 8 months following penicillin treatment for early syphilis, the 'failure' rate was higher in patients treated with inadequate amount of penicillin. After eight months, the rate fell to the level seen in patients who received much larger adequate amounts of penicillin. The late failure rate appeared to bear no relation to the amount of treatment, but was higher in Negroes than in Whites. Merrill applied the late failure rate to the entire period of observation and was able to estimate the percentage of failures which are actually reinfections. This percentage was higher in Negroes than in Whites and also in groups receiving the more successful treatment schedules than in groups receiving lower dosage.

The problem of how frequently reinfection occurs in contrast to relapse in a community or population depends upon several factors:

1. The degree of promiscuity: The chance of reinfection is in direct proportion to the frequency with which an individual exposes himself to infection.

2. The prevalence of infectious syphilis in a community. The risk of reinfection after each sexual act is greater in populations with a high incidence of infectious syphilis as has been statistically proved among the Negroes of America.

3. Adequacy and speed of contact investigation: An important factor favouring reinfection is the failure to find and treat the infectious contacts. This is rendered particularly difficult in short course intensive penicillin treatment which does not permit sufficient time to find and treat the infectious contacts even in well organised epidemiological service. The rapid uncovering and bringing under treatment the undiscovered infections in a population is the lynch pin of syphilis control with penicillin. In the absence of quick, efficient, epidemiological service, reinfection especially of the ping-pong variety, will continue to be a recurrent feature of current intensive therapy.

4. The relative proportion of reinfection to relapse, depends upon the *adequacy of treatment of the first infection* during the first nine months of post-treatment observation. Insufficient treatment is more likely to result in relapse, than in reinfection. Among the Negroes attending the Bellevue Hospital, New York, the reinfections accounted for 55 per cent of failures among those receiving the optimal treatment, and only 25 per cent for the least successful treatment (Merrill, 1951). This is in accord with the claim put forward by Schoch (1952), Schamberg and others (1948) that the majority of failures in cases of well treated early syphilis is due to reinfection.

5. Another additional evidence to support the view that reinfection rather than relapse accounts for the 'treatment failures' in adults in the majority of cases, is the *rarity of relapse in adequately treated early prenatal syphilis.*

6. Several studies have demonstrated that a higher rate of cure is obtained in primary than in secondary syphilis. Hence with adequate identical treatment, one would expect fewer relapses in primary than in secondary syphilis. But if in a series of patients with early syphilis adequately treated, a great number of treatment failures is found in patients treated for primary syphilis than in those treated for secondary syphilis the conclusion is inescapable that reinfection is the cause of the new lesions in a significant number of cases.

Reinfection may not always occur in the form of a chancre. Lesions resembling those of secondary syphilis may be the only evidence of reinfection particularly in females. It has been our observation that many women seen in clinical practice, do not have demonstrable chancres even after their original infection and in reinfection, chancres are rarely observed. In such cases, the

secondary lesions form the only evidence of reinfection. The same applies to a lesser degree to men after reinfection when only secondary lesions are observed.

The behaviour of the serological titre has been invoked to differentiate between relapse and reinfection. It is stated that a positive reaction of the blood or a sudden upward swing of the serological titre usually precedes the development of clinical lesions in relapse, whereas in reinfection, the positive from a negative serology or a gradual rise in titre follows the development of clinical lesions. In the authors' experience this criterion is rarely applicable as patients do not turn up for frequent and regular examinations after the first infection and fail to present themselves soon after the appearance of the 2nd infection.

There does not seem to be any unanimity of opinion on the question of retreatment schedule for patients coming with a second infectious episode. Some authors recommend higher penicillin dosage irrespective of whether the case is one of reinfection or relapse ; while others recommend the same dosage as that given for the first infection in the case of suspected reinfection and higher dosage for a case of relapse. It is stated that the occurrence of recurrent infectious episodes after adequate treatment with penicillin suggests reinfection and relapse is the more likely occurrence after inadequate or sub-curative treatment. Several evaluative studies of penicillin therapy during the last decade, indicate that a penicillin dosage of 2·4 to 4·8 mega units administered over a period of a week or ten days may be considered adequate for primary and secondary syphilis.

There is also evidence to show that penicillin combined with arsenic and/or bismuth has the lowest recorded reinfection and relapse rates in early syphilis. In differentiating between reinfection and relapse, epidemiological evidence of exposure to a contact with infectious lesions followed by a darkfield positive lesion after an acceptable incubation period, should be given a greater consideration than has been conceded hitherto.

Apart from the experimental studies on rabbit syphilis in which it has been shown by a number of workers, that reinfection and superinfection can occur without cure of the original infection, Moore (1945) has put forward a cogent reason for discarding the Neisserian concept of reinfection as a criterion of cure in man. To quote his words, "If the resistant state in man is so abolished or its development so impeded, by sub-curative treatment as to permit infectious mucocutaneous relapse as a response to the local multiplication or redissemination of his own remaining organisms, so likewise may his immunity be abolished or impeded that his tissues react to a fresh inoculum from without by the development of superinfection". Grin (1953) in his report on a mass treatment campaign against endemic syphilis in Bosnia, has brought forth abundant evidence that superinfection with the development of benign late lesions of the skin and mucous membranes result from exogenous sources of treponemes in persons with untreated or inadequately treated late latent syphilis. His studies have shown a direct correlation in the community between the incidence of early and late skin lesions and he has illustrated the thesis with a number of family case histories.

Since the advent of penicillin therapy in early syphilis,* it has been observed that a second or subsequent infectious episode after treatment of the first infection manifests in the form of mucocutaneous lesions in the vast majority of cases observed and reported by a number of clinicians. Lesions involving other structures, like the bone, cranial nerves and the ocular apparatus, have only been very infrequently reported, whereas in the era of arsenic-bismuth treatment, such types of recurrences were not uncommonly observed especially with subcurative treatment. No adequate explanation has been offered for this difference in the patterns of infectious recurrences.

Levaditi and Vaisman (quoted by Beerman *et al.* 1953) in their experimental studies on the synergistic treponemicidal effect of bismuth and penicillin on rabbit syphilis, treated three sets of rabbits infected with the Nichol strain of T.P., with a † Procaine bismuth preparation alone, with penicillin alone and with a combination of both. In the rabbits treated with procaine bismuth, the testicular lesions rapidly healed with cicatrization, the *T.P.* disappeared from the blood in all the animals treated and sterilisation of the peripheral lymph nodes was achieved in 50 per cent of the animals. In rabbits treated with penicillin alone testicular lesions healed, and *T.P.* disappeared more rapidly from the blood but the peripheral lymphatic system was still harbouring *T.P.* and a specific local recurrence was observed after treatment was stopped. In the third set of rabbits treated with both penicillin and bismuth a radical cure was achieved by the healing of the testicular lesions and by the complete disappearance of *T.P.* from both blood and the peripheral lymphatics. Can this explain the clinical pattern of infectious relapse in penicillin treated human cases? If the studies are duplicated and confirmed by other workers, the optimism entertained by syphilologists and public health workers on the curability of early syphilis by penicillin alone, may require a certain

† A bismuth in oil preparation without penicillin.

devaluation and the difficulty of differentiating relapse from reinfection will be accentuated. If the results of experimental studies in rabbit syphilis show that asymptomatic reinfection can occur in animals treated with penicillin for the original infection, it may be reasonable to assume that a similar phenomenon can occur in human beings.

In the United States, inspite of the precipitous decline in the reported rates for primary and secondary syphilis from 1947 to 1953, from 75·68 to 6·27 per 100,000 of the population, the number of cases of early asymptomatic syphilis reported, has always exceeded those of primary and secondary syphilis in any one year and have actually registered a three fold increase in 1953. It is possible a significant proportion of these latent cases, may be asymptomatic reinfections. Since a person with asymptomatic reinfection is unaware that he harbours the infection, he is not likely to consult a physician, except when he is serologically screened. Hence an unknown and undetermined number of persons in a population, may be potentially infectious or may subsequently develop serious late syphilis. For the individual sustaining a reinfection or relapse either symptomatic or asymptomatic, all that he requires is retreatment with a larger dose of penicillin. The importance of differentiating reinfection from relapse arises from the point of view of the therapeutic evaluation of particular treatment schedules in the cure of early syphilis. Although strict scientific proof may be lacking, physicians should be guided by clinical impressions, epidemiological evidence and adequacy of treatment for the first infection as practical criteria to differentiate reinfection from relapse. With this brief review of the existing knowledge on the subject, the authors wish to present clinical data from an analysis of cases examined and treated at the Venereal Diseases Clinic of the Government General Hospital, Madras.

Analysis of Clinical Data

During the three years 1951-53, 12,186 patients with early manifest syphilis were examined and treated. The diagnosis of early syphilis was established by clinical, darkfield and serological examinations conducted routinely on all cases.

Table I—Showing Incidence of Primary and Secondary Syphilis during 1951-1953

Year	Primary	Secondary	P : S Ratio
1951	... 1,451	2,807	4 : 7
1952	... 1,871	2,823	2 : 3
1953	... 1,610	2,224	2 : 3
Total	... 4,932	7,254	2 : 3

From Table 1 it will be seen that secondary syphilis predominated over primary syphilis in the proportion of 3 : 2. All the patients with the exception of a few, were treated with one or other acceptable brand of procaine penicillin in oil with aluminium monostearate (P.A.M.) in four schedules of 0·3, 1·2, 2·4 and 4·8 mega units. During this period 206 patients who reported with recurrent infectious episodes after treatment for the first infection were studied. But this number does not represent the possible and probable total failures among the twelve thousand and odd patients treated for the first infection. The majority of the treated patients had not returned to the clinic for a check up. It is our surmise that a fair but unknown proportion of patients who had sustained a recurrent infectious episode, after treatment for the first infection, might have reported to other V.D. clinics in the city or been treated by private physicians. Hence any calculation of the percentage rating of recurrent infectious episodes based upon the 206 patients who reported to the clinic will be fallacious.

The several factors which favour reinfection in a population which are operating in Madras may be inferred from the following data:

1. Among the total admissions for syphilis the patients with early infectious syphilis form 66 per cent of the total.

2. The ratio between male and female admissions for early infectious syphilis is 3 : 1, which shows that a large reservoir of undiscovered infection among the female population never reaches hospital clinics and is spreading the infection among the non-immune population.

3. Patients seeking treatment at the hospital, belong to the illiterate, under-privileged sections of the population.

4. Routine serological screening of expectant mothers attending the various antenatal clinics of the city reveals a 6 to 8 per cent of positive reactors which is a fairly reliable index of the high prevalence of syphilis in the population as a whole.

5. The restricted epidemiological and case finding service is unable to cope with the heavy clinic load of infectious syphilis. Contact tracing is difficult and slow and does not keep pace with the rapid turn over of patients who complete treatment in a few days.

Out of these 206 cases studied, 198 have been treated with penicillin for the first infection. Six were treated with oxophenarsine or bismuth or both. One patient was treated with chloramphenicol and one with amine penicillin. A few of the 198 penicillin treated patients received a few additional injections of oxophenarsine or bismuth. For

study and analysis, only 198 cases who were treated with penicillin are taken into consideration. In this group of 198 patients one seventh or about 14 per cent reported for the 3rd and 4th time with infectious lesions. For statistical analysis only the cases who reported with the first recurrent infectious episode are considered as they form the largest group.

The criteria for differentiating relapse from reinfection were based on clinical impression, epidemiological evidence of infection in the contact, adequacy of treatment and interval between the first infection and subsequent infectious failure. They have been classified under three heads: 1. Relapse 2. Reinfection and 3. Unclassified. 22 patients had to be relegated to the third category of unclassified because of lack of reliable data. The first two groups are studied according to the initial stage of infection.

TABLE 2

1st infectious episode	Stage of First Infection		P :S Ratio
	Primary	Secondary	
Relapse ...	34	36	1 :1
Reinfection ...	69	39	2 :1
Total ...	103	75	

Out of 108 reinfections shown in Table 2, 39 were of the 'Ping-Pong' variety. The relapse rate seems to be more or less identical with reference to the stage of original infection, but of 108 reinfections, in 69 the original treatment was for primary syphilis and 39 for secondary syphilis. This indicates that reinfection occurs more frequently after treatment for primary syphilis than after treatment for secondary syphilis. It has also been observed that primary syphilis is more easily cured than secondary syphilis with a given schedule of treatment.

TABLE 3—SHOWING INTERVAL BETWEEN FIRST INFECTION AND FIRST INFECTIOUS EPISODE

Interval	Relapse	Reinfection
8 months and under ...	53	68
Over 8 months	17	40

It would be seen from Table 3 that reinfection was more frequently encountered beyond eight months after treatment for the original infection irrespective of schedule of treatment although under eight months there was no significant difference between relapse and reinfection.

TABLE 4—SHOWING INCIDENCE OF RELAPSE AND REINFECTION IN TREATED CASES

Treatment	Relapse	Reinfection
Inadequate therapy 0·3 to 1·8 M.U. ...	55	32
Adequate therapy 2·4 to 6·2 M.U ...	13	76

Table 4 gives the incidence of relapse and reinfection according to the adequacy or otherwise of treatment. From the table it could be seen that with inadequate treatment there were 55 cases of relapse as against 32 cases of reinfection, i.e. relapses accounting for 63 per cent of recurrent infectious episodes. Among those who received adequate therapy 76 were cases of reinfection and only 13 cases of relapse, reinfection thus accounting for 85 per cent of recurrent infectious episodes among those who had adequate therapy. Comparing Tables 3 and 4 it would appear that adequacy of treatment plays a more important part than interval between the 1st infection and the subsequent infectious episode.

An attempt is made to represent graphically the combined effect of adequacy of treatment and interval between original infection and subsequent failure. The curves are smoothened off by adding the points at 0·3, 1·2, 2·4 and 4·8 since a large percentage of patients were treated with only these schedules and represent the real incidence of recurrent infectious episodes (Figs. 1 and 2).

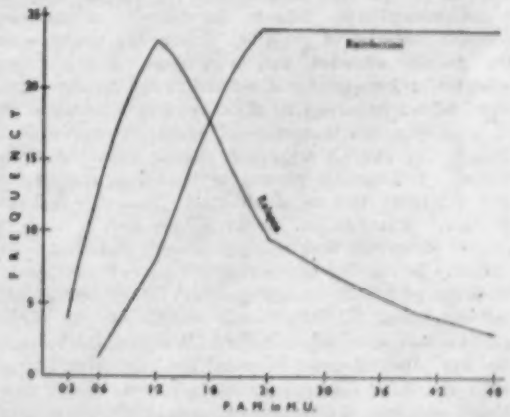

FIG. 1—SHOWING COMBINED EFFECT OF TREATMENT AND INTERVAL, BELOW 8 MONTHS.

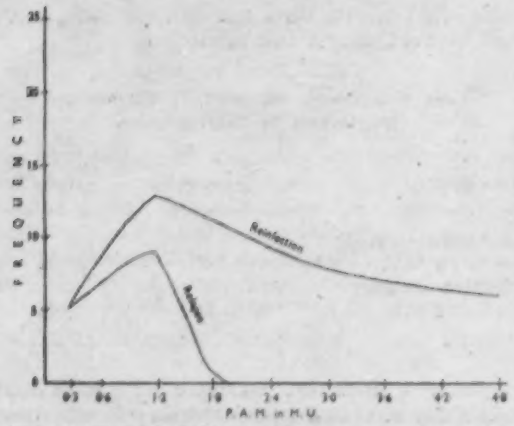

FIG. 2—SHOWING COMBINED EFFECT OF TREATMENT AND INTERVAL ABOVE 6 MONTHS.

A few illustrative case reports are presented

ILLUSTRATIVE CASES

Case 1—An unmarried male aged 22 years presented himself at the V.D. department on 10-5-1950 complaining of sores on the genitalia. Examination revealed multiple papulo-erosive indurated chancres on the coronal sulcus and ridge at 12 and 5 o'clock positions with regional lymphadenopathy. The lesions were darkfield positive for treponema and the blood was positive to VDRL. A diagnosis of sero-positive primary syphilis was established and the patient received one injection of oxyphenarsine and two injections of bismuth and defaulted. He turned up again on 23-10-1950 with erosive moist syphilides on external genitalia—darkfield and serologically positive. He received three injections of 300,000 units of P.A.M. daily for 3 days. The syphilides healed within a week and the patient defaulted for the second time. Seven months later on 1-5-1951 he attended the department with an insignificant but darkfield positive sore on coronal sulcus. He received 300,000 units of P.A.M. daily on 3 consecutive days. Due to the difficulty of obtaining adequate supplies of penicillin during the period when the patient attended the department, the minimum schedule of 3 doses of P.A.M. was in routine use. Nine months later he turned up at the department complaining of numbness and weakness of lower extremities with difficulty of passing urine and stools. Examination revealed a few annular papular syphilides on the scrotum and a solitary mucous patch inside lower lip darkfield positive. Examination of C.N.S. revealed a state of spastic paraplegia with minimal sensory disturbance and difficulty in starting micturition. His blood was positive to Kahn and Wassermann reaction, C.S.F. was slightly turbid, showed 152 cells mostly lymphocytes, 90 mg. of protein and a strongly positive Wassermann reaction. He was admitted as an inpatient and was given 3 mega units of P.A.M. The patient improved, was able to move about and was discharged. A year after he returned for a check up and was found to have a certain amount of residual spastic disability, with loss of libido. Blood and C.S.F. were negative.

The patient under study illustrates a case of repeated relapsed after inadequate therapy, the last relapse involving the central nervous system also. This is the first case of neuro-relapse encountered by the authors following inadequate penicillin therapy.

Case 2—An unmarried male aged 26 years attended the V.D. Department on 1-2-1952 with a darkfield positive seronegative syphilis. The patient received only one injection of P.A.M. 300,000 units followed by 6 injections of bismuth every 5th day to a total of 6 doses. The primary lesion satisfactorily healing during the period of observation and he was discharged from the hospital. He reported on 20-1-1953 i.e. 11½ months later for a post-treatment observation. He was found to be clinically and serologically free from any syphilitic infection. But on 20-2-1953 he returned to the clinic with a papulo-erosive sore on the right side of penile shaft with regional lymphadenopathy. The lesion was darkfield positive and the blood was positive to VDRL test. He gave a history of exposure to the risk of infection on 5-2-1953.

The case illustrates a typical reinfection in a patient who was treated adequately for his original infection and was found to be clinically and serologically negative 11½ months after the first infection, but sustained a reinfection with a definite history of having re-exposed himself to the risk of infection. The site of the chancre of the first infection was on the frenum, whereas the chancre of the second reinfection occurred on the shaft of the penis.

Case 3—An unmarried male aged 20 years presented himself at the V.D. department on 19-3-1953 and examination revealed a darkfield positive seronegative primary syphilis involving the edge of prepuce with regional adenopathy. He gave a history of having exposed himself to the risk of infection about 4 weeks before he developed the sore. He received 2·4 mega units of P.A.M. consisting of 1·2 mega unit on 19-3-1953, 600,000 units on 21-3-1953 and another 600,000 units on 23-3-1953. On 2-4-1953 the sore completely healed and the patient was discharged from observation. On 23-3-1954 exactly 12 months after the last treatment for his 1st infection, he presented himself at the clinic and examination revealed a darkfield positive seronegative primary syphilis of 3 days' duration with marked regional adenopathy. The chancre of 1st infection was at the edge of the prepuce while the primary lesion of the 2nd infection was on the coronal sulcus. He received a total of 4·8 mega units of P.A.M. during the period of 8 days. The lesions healed and the patient was discharged from observation.

This case is another example of a typical reinfection in a patient who had a darkfield positive seronegative primary syphilis on both occasions.

Case 4—An unmarried male aged 25 years attended the V.D. department on 12-10-1952 complaining of sore on external genitalia of a fortnight's duration with a history of having exposed himself to the risk of infection 15 days before the appearance of sore. Examination showed a painless indurated sore on the ventral

aspect of shaft of penis, darkfield positive to treponema and serologically negative. A diagnosis of darkfield positive seronegative primary syphilis was established and the patient received 2.4 mega units of P.A.M. divided into 3 doses of 1.2, 0.6, 0.6 mega unit administered on alternate days. The sore rapidly healed within a week and the patient was discharged from observation. On 2-1-1953 exactly 2 months 15 days after his last treatment he came back to the clinic with multiple erosive sores on the left side of glans penis and prepuce with a definite history of exposure to the risk of infection 15 days before the appearance of the lesion. The duration of the sore was about 1 week. The lesions were darkfield positive to treponema but the blood was negative to both Kahn and Wassermann. He received 4.8 mega units of P.A.M. at the rate of 0.6 mega unit daily for 8 days. The sore completely healed at the end of treatment. On 17-3-1953 he turned up for the 3rd time with an indurated papulo-erosive chancre on coronal sulcus at 2 o'clock position with a history of having exposed himself to a different source of infection 12 days before he noticed the sore. At the time of his 3rd visit the lesion was 10 days old. During all the three visits there was palpable regional adenopathy which subsided with treatment all the three times. The lesion was darkfield positive to treponema and the blood was positive to VDRL test dil 2. He received 1.2 mega units on 1st day of his 3rd visit and defaulted. The patient under study comes from the underprivileged section of the community and is habitually promiscuous in his sexual habits.

The case under report is an example of repeated reinfections inspite of adequate therapy occurring at very short intervals between the first and successive reinfections.

Case 5—A married male aged 26 years came to the clinic on 20-4-1953 with the complaint of a genital sore of 3 weeks' duration with a history of extramarital sexual exposure 3 months before the appearance of the lesion. Examination showed a darkfield positive indurated sore at the frenum with oedematous paraphimotic prepuce and palpable and painless regional lymphadenopathy. His blood was positive to VDRL with a dilution of 2. A diagnosis of darkfield positive seropositive primary syphilis was established. He received 4.8 mega units of P.A.M. in three divided doses of 1.2, 1.2 and 2.4 mega units on 21st, 23rd and 25th April 1953. The sore healed within a week and he was advised to bring his married partner for examination as he confessed having had sexual intercourse with her prior to coming to the clinic for treatment. But he failed to turn up with his wife. On 1-7-1953, he returned to the clinic but without his wife. Examination revealed a darkfield positive chancre at the coronal sulcus at 8 o'clock position with palpable inguinal lymph nodes. He stated that his sexual contacts were only with his wife who had recently broken out with some eruptions on her skin. His blood showed a low titred positive serology to VDRL dil 2. He received 1.2 mega units on the day of his second visit and promised to bring his wife next day. But the wife turned up as promised but without the husband who left the station on some business tour.

The wife when examined on 2-7-53 was found to be suffering from florid secondary syphilis with universal lymphadenopathy of a fortnight's duration, and a positive serology dil 64. There was no clinical evidence of past or active lesions on the external genitalia and the cervix uteri. The cutaneous papular syphilide was darkfield positive to *treponema pallida*. She received 3.6 mega units of P.A.M. interruptedly during a period of 4 weeks. The cutaneous lesions had completely involuted and lymphadenopathy subsided by the end of the period of treatment.

In the meantime, in response to the letter sent by the social worker, the husband came to the clinic on 30-7-1953 and a check up revealed no clinical or serological evidence of infection. On 21-1-54, 23 weeks after his last visit, he turned up at the clinic with a large indurated sore of a week's duration on the inner side of the prepuce at 6 o'clock position, with unilateral regional lymphadenopathy. The lesion was darkfield positive to *T.P.* and the serological reaction was positive to VDRL dil 8. A definite history of extramarital exposure to the risk of infection 3 weeks before the appearance of the sore was elicited and the patient also gave the assurance that he has had no sexual contact with his wife after his last extramarital escapade. He received a total of 4.8 mega units of P.A.M. from 27-1-54 to 9-2-54. The sore healed rapidly with subsidence of the inguinal lymphadenopathy. During this period the wife was examined. Although she was clinically and serologically negative, she was given an epidemiological dose of P.A.M. (1.2 mega units). The case reported is an example of 'ping-pong' syphilis where the husband after cure of his first infection, sustained a reinfection from the untreated wife with infectious syphilis, two months after receiving adequate therapy for the original infection. The reinfected husband and the untreated wife with secondary syphilis were simultaneously treated and the ping-pong transmission was broken. But the husband does it again and acquires a *second reinfection* from an extramarital contact six months after he was cured of his first reinfection. The wife seems to have escaped the second transmission from the husband although as a precautionary measure, she was given an abortive epidemiological dose of P.A.M.

Conclusion

From a review of the literature and our own observations based upon the clinical data presented herein, certain conclusions may be drawn on the problem of reinfection and relapse in syphilis in the current antibiotic era.

1. Since the advent of penicillin in the rapid therapy of early syphilis, the natural immunity mechanism of the host against the parasite is either suppressed or modified and the former becomes susceptible to reinfection with either the homologous strain as in the case of conjugal infection, or a heterologous strain of the organism.

2. It is reasonable to assume that the majority of the reported retreatment cases are in reality reinfections rather than relapses.

3. The clinical pattern of reinfection after penicillin therapy of the first infection may either be a chancre or in the case of most women and some men, may resemble moist mucocutaneous lesions of secondary syphilis. In true relapse after inadequate penicillin therapy the pattern of recurrence is invariably of a mucocutaneous type and rarely involves other structures such as the eye, bone or the central nervous system. It is a matter for speculation that with the widespread use of penicillin in the treatment of syphilis and in other bacterial and coccal infections during the past decade, whether the treponeme is undergoing a subtle change and is reverting to its primitive dermatologic type with a diminution in its invasive virulence. There has been observed in recent years a decline in the incidence rating of asymptomatic neurosyphilis discovered in the routine examination of C.S.F., in early untreated syphilis. Further neurorelapse or ocular relapse after inadequate penicillin therapy of early syphilis has been very infrequently observed.

4. The greatly increased occurrence of reinfection following a successful treatment of the first infection, reported by several observers in the current antibiotic era, is not a problem in therapeutics, but one of epidemiology and application of public health techniques in rapidly uncovering the undiscovered infectious reservoirs in the community.

5. It is a matter for serious consideration by clinicians and public health administrators, that in communities with a high incidence of syphilis, with a socially irresponsible section of the population prone to sexual promiscuity, and with poor or non-existent epidemiological service whether it would not be a desirable thing to use the slow acting bismuth along with penicillin to confer a measure of chemical quarantine in all cases of reinfections and in patients with the first infection, who are likely to be promiscuous in their sex relations. In the V.D. clinic at Madras, the concurrent schedule of 4·8 mega units of P.A.M. in 3 to 8 doses and 6 injections of an insoluble bismuth preparation administered once in 5 days is currently being followed in such patients.

Summary

A short review of the problem of reinfection and relapse in syphilis is attempted. Clinical data on the subject are furnished from an analysis of the patients who attended the V.D. clinic at Madras during a period of 3 years. A few illustrative case reports are presented and certain conclusions are drawn.

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SOME OBSERVATIONS IN TYPHOID FEVERS

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The typhoid fevers constitute one of the major medical problems in our city. During the year 1953, in the city of Madras, 1064 cases were notified, of which 186 died.

The material for this study comprises of 100 consecutive cases admitted to my wards in the Government General Hospital, Madras, during the period of from June 1953 to April 1954. However, children under the age of 10 years have not been included in this study since they come separately under the care of the pediatric physician. The diagnosis in each case was confirmed bacteriologically. 98 of the cases were typhoid fever and 2 were paratyphoid A. There were no cases of paratyphoid B.

Age and sex incidence—The oldest case in this series was a 42 year old male. The highest in-

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cidence, in men as well as women, was between the ages of 21 and 30 (69 per cent.) (Table 1).

TABLE 1—SHOWING AGE INCIDENCE

Age in years	Men	Women	Total
11—15 ...	3	7	10
16—20 ...	8	4	12
21—25 ...	19	9	28
26—30 ...	26	15	41
31—35 ...	4	1	5
33—40 ...	3	—	3
41—45 ...	1	—	1
Over 45 ...	—	—	—
Total ...	64	36	100

CLINICAL PICTURE

73 cases conformed to the classical descriptions. 16 of these had a stormy course. The patient looked extremely ill, the temperature was high, 104°F. or more, irritability, delirium and drowsiness were very marked, the tongue was often dry. In these patients, nutrition could be maintained only through tube-feeding. These were designated as the hypertoxic type. The remaining 57 cases lay passively in bed, there was moderate delirium, subsultus tendinum was present, but nutrition could be maintained by oral feeding without resorting to tube-feeding. These were classed as the toxic type.

23 cases had a mild course. The fever was high, 103°F. and above, but there was a conspicuous absence of irritability and delirium. The patient looked bright and took his own feeds without assistance. There was no drowsiness at any stage of the fever. They are classed as the mild type.

4 cases did not look ill at all. The temperature was less than 100°F. The patients often sat up in bed, and the fever lasted a week or less. These were classed as nontoxic.

It will be noted that the two types mentioned last (23+4=27 per cent) were quite mild with absence of delirium and toxicity. Other symptoms like abdominal distension and respiratory catarrh were very mild, headache was absent.

Mention may be made about the incidence of the following symptoms:—10 cases had ulceration of the lips and gums; 6 cases had diarrhoea in 2 of which the diarrhoea was persistent and troublesome; 2 cases had deafness which, however, was transient; and 99 cases had distension of the abdomen to a varying degree.

Bronchitis was usual; bronchopneumonia developed in 7 cases and 2 cases had lobar pneumonia; headache was present in 65 cases; constipation was more common; and no case had any rose spots.

It may be noted that abdominal distension of a mild or moderate degree was present in 99 per cent of the cases and therefore acquired considerable importance in clinical diagnosis.

Some cases had an unusual clinical course. Below is given an illustrative case report.

ILLUSTRATIVE CASE

G., 23 years old mazdoor, was admitted with parotitis and fever of five days' duration. He was of normal build and did not look ill. A provisional diagnosis of mumps was made and he was isolated. In two days, the patient became toxic and delirious. Mumps encephalitis was suspected. Lumbar puncture showed clear fluid under tension; there were no cells. The blood culture was positive for *B. typhosus*. The case was treated accordingly, but during convalescence, he developed empyema as a complication. The aspirated fluid did not show typhoid bacilli. He eventually recovered.

DIAGNOSIS

Clinically, typhoid fever in this series had to be differentiated from meningitis, from acute kala-azar and tuberculosis, especially miliary. Laboratory confirmation was sought for in every case. The following criteria for laboratory diagnosis were laid down and every case was proved to be typhoid:

A positive blood or sternal marrow culture for *S. typhi*, or

a Widal of 1 in 200 or more, after excluding history of recent inoculation with T.A.B. vaccine, and a rising titre, or

positive urine or stool culture in the course of a clinical attack of typhoid.

Positive blood cultures for *S. typhi* were obtained in 64 cases (Table 2).

TABLE 2—SHOWING INCIDENCE OF CASES POSITIVE TO *S. typhi*

		No. of cases positive to *S. typhi*	No. of cases positive to *S. paratyphi*
Blood culture	1st week ...	13	1
	2nd week ...	12	
	3rd week ...	19	
	Total ...	64	
Culture of sternal marrow		2	1
Culture of urine ...		1	—
Culture of stools ...		2	—
TOTAL		69	2

In 30 cases Widal alone was positive, in another 30 cases the blood culture alone was positive and in 34 cases both blood culture and Widal were positive. Therefore, if either test is done alone, about a third of the cases will be missed.

The blood culture was positive for *S. paratyphi* in one case.

The sternal marrow was cultured in 3 cases where both blood culture and Widal were negative. *S. typhi* was grown in marrow culture in 2 cases, and *S. paratyphi A* in the remaining case.

In 3 more cases of clinical typhoid fever where both Widal and blood culture were negative, the diagnosis was established by isolating *S. typhi*, from the urine in one case and from the stools in two cases.

Complications

The following was the incidence of complications (Table 3).

Table 3—Showing Incidence of Complications

Complications	No. of cases	Result
Haemorrhage	3	2 fatal
Perforation	2	1 fatal
Peripheral failure ...	2	2 fatal
E. coli pyelitis	25	recovered
Relapses	13	recovered
Parotitis	6	recovered
Bed sores	6	recovered
Empyema	1	recovered

It may be noted that *E. coli* infections of the urinary tract were the most common of all complications (25 per cent). Relapses came next. In this series, there were altogether 13 relapses with positive blood cultures for *S. typhi* during the relapse. 5 of these occurred in mild and non-toxic cases which had not received any specific antibiotic therapy.

The mortality in this series was 5 per cent as can be seen from Table 3. The onset of serious complications bore no relationship to the severity of the case. One non-toxic case developed haemorrhage and one mild case had perforation.

Treatment

Dietetic treatment—Feeding the typhoid patient is a problem. The high calorie diet advocated by some could not be adopted in this series. The hypertoxic and toxic types which constitute 73 per cent of cases in this series could only be fed with fluids and in the remaining 23 per cent which were mild or non-toxic, there was anorexia and the patient could not be coaxed to take a high calorie diet.

During the febrile period, the patients were given 3 to 4 pints of fluids by mouth, per day, in the form of milk, barley water, orange juice and sago conjee. The calorie value of this fluid diet was approximately 1200 calories. If there was diarrhoea, arrowroot conjee was substituted for sago and every milk feed was citrated. Glucose water by mouth was seldom given as it leads to increase in the abdominal distension. Where necessary, 25 per cent glucose was given intravenously. This diet was continued until the temperature came down to normal and remained normal for 48 hours. On the third day of convalescence, bread and egg flip were allowed. On the fifth day, rice and curds and mutton minced were allowed and from the seventh day onwards normal diet was permitted.

Symptomatic treatment—General treatment consisted of a diaphoretic mixture and multivitamins. Patient was given 4 pints of fluid by mouth and when oral feeding was not possible, the fluid balance was maintained by 2 to 3 pints of 5 per cent glucose saline with 100 mg. of nicotinamide by slow intravenous drip. Oral hygiene was maintained and ulceration of the gums and lips was treated with gentian violet paint. Cases with low blood pressure had desoxycorticosterone acetate intramuscularly. Abdominal distension was treated by putting in a flatus tube and turpentine stupes.

Specific treatment—It consisted of oral chloramphenicol. Only toxic and hypertoxic cases were treated with this antibiotic. In all 69 cases had specific therapy. In one hypertoxic case where 250 mg. was administered every two hours, there was peripheral collapse and the patient died leading to an abandonment of the two hourly schedule. Usually, the toxic cases were put on a regime of 250 mg. every four hours. Hypertoxic cases were given 250 mg. every three hours. This was continued until the temperature came down to normal and stayed normal for 48 hours. Then, the antibiotic was discontinued. The temperature came down by lysis, and touched normal from the fourth to the tenth day. It was noticed that 8 of 38 such cases (Group 1) relapsed with positive blood cultures during convalescence. 7 relapsed within 15 days, and one relapsed on the twentyfirst convalescent day.

Our dosage schedule was therefore modified to cover the convalescent period, in the other 30 cases (Group 2) where chloramphenicol was as above, but on the first day of normal temperature, dose was reduced to 250 mg. every six hours, on the

second day 250 mg. was given eight hourly and thereafter 250 mg. thrice daily for ten days. On this regime, none of cases had relapse upto the time of 7 months. Each case required on an average 72 to 80 capsules (18 to 20 g.) for the entire course of treatment.

No harmful side-effects were observed with specific therapy on this dosage. No case had aplastic anaemia.

Subsequent to this series, a further 65 cases of proved typhoid fever occurring during the period of from May 1954 to October 1954 were given chloramphenicol cover 250 mg. b.d. for ten convalescent days and none of those had relapsed to date.

In 25 cases, positive urine cultures for *E. coli* infections were obtained. Of these, 20 cases were receiving chloramphenicol. Apparently in the dosage used, chloramphenicol was without any effect on *E. coli* infections of the urinary tract. The infection was however easily controlled by oral sulphanilamide.

The relapse rate may vary from epidemic to epidemic and therefore no definite conclusion can be drawn by comparison of relapse rates occurring in different epidemics.

Summary and Conclusions

A study of 100 consecutive cases of proved typhoid fevers is presented.

The highest incidence in men as well as women appears to be between the ages of 21 and 30.

Abdominal distension however mild was present in 99 cases and therefore constituted an important clinical sign of diagnostic importance.

Rose spots were absent in this series.

The bacillus was isolated in 71 per cent of the cases.

Two hourly administration of chloramphenical is unsuitable for the average South Indian patient.

Relapses were high when the antibiotic was discontinued 48 hours after the temperature touched normal.

30 cases had a chloramphenicol cover for the first ten days of convalescence (250 mg. t.i.d.). None of these cases had relapsed over a period of seven months and more. Subsequent to this series, 65 proved cases of typhoid fever occurring during the period May 1954 to October 1954 had chloramphenicol cover 250 mg. b.d. for ten convalescent days and none of these had relapse to-date. In all 95 cases (30 + 65) had chloramphenicol cover during the convalescent period and none had relapsed.

Acknowledgment

My thanks are due to Lt.-Col. C. K. Prasada Rao, Dean, Government General Hospital, Madras, for permission to publish the case reports and to Dr. N. L. Kantha Rao and U. Muhammad for assistance in the compilation and analysis of the data.

OBSERVATIONS ON COMPLICATIONS AND TREATMENT OF ENTERIC GROUP OF FEVERS

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Enteric group of fever is endemic in the city of Bombay. Although it has not been declared as an epidemic disease in the city of Bombay ; however, the number of admissions of enteric fever at City Fever Hospital have gone as high as 3065 in the year 1949.

My observations are, however, based on 2056 cases of enteric group of fevers admitted in City Fever Hospital during the year 1953 (Table 1).

Table 1—Showing Yearly Incidence and Mortality Rate

Year	Admissions	Deaths	Case fatality rate (per cent)	Case fatality rate excluding moribund cases (per cent)
1944 ...	624	149	23·8	22·2
1945 ...	1180	229	19·3	17·6
1946 ...	1790	140	18·9	13·9
1947 ...	1464	251	17·1	13·8
1948 ...	2480	440	17·6	11·8
1949 ...	3065	455	14·8	11·2
1950 ...	1208	197	16·3	12·2
1951 ...	1153	128	11·1	8·0
1952 ...	1554	250	16·0	12·2
1953 ...	2056	205	10·0	7·2

Complications

The complications that were observed in the series under reference are given in Table 2.

TABLE 2—SHOWING INCIDENCE OF COMPLICATIONS IN ENTERIC GROUP OF FEVER CASES ADMITTED IN CITY FEVER HOSPITAL DURING THE YEAR 1953

Complication	No. of cases with complications	Percentage of total no. of enteric fever cases	No. of cases recovered	No. of cases died	Case fatality rate (per cent)
Toxaemia ...	703	34·2	542	161	22·9
Bronchopneumonia	635	30·8	546	89	14·0
Meteorism ...	420	20·4	348	72	17·1
Diarrhoea and dehydration ...	356	17·3	284	72	20·2
Pyelitis ...	235	11·4	235	—	—
Anaemia ...	199	9·8	199	—	—
Circulatory failure	177	8·6	65	112	63·2
Haemorrhage per rectum ...	165	7·8	144	21	12·7
Meningism ...	70	3·2	47	23	32·8
Retention of urine	35	1·2	35	—	—
Perforation ...	27	1·3	10	17	62·9
Parotitis ...	25	1·2	25	—	—
Peripheral neuritis ...	2	0·09	2	—	—

Toxaemia—By toxaemia is meant a toxic condition without any clinical manifestations like bronchopneumonia, diarrhoea, distension etc. Toxaemia was noticed in 703 cases out of which 161 died giving a case fatality rate of 22·9 per cent. This complication was noticed in nearly one-third of the patients admitted.

Bronchopneumonia—This complication was noticed in 635 cases i.e. nearly 30 per cent of the total admissions out of which 89 died giving a case fatality rate of 14·0 per cent.

Meteorism—If slight distension is taken as meteorism this complication was present in most of the cases but I am referring to meteorism as severe distension. This complication was present in 420 cases out of which 72 died giving a case fatality rate of 17·1 per cent.

Diarrhoea and dehydration—This was noticed in 356 cases out of which 72 died giving a case fatality rate of 20·2 per cent.

Pyelitis—Pyelitis was noticed in 235 cases and all recovered.

Anaemia—This complication was noticed in 199 cases. None of them proved fatal. I would like to point out here that this complication was noticed more in the cases treated with chloramphenicol although no case of aplastic anaemia was observed.

Circulatory failure—It is necessary here to differentiate between circulatory failure from a collapsed stage observed during chloramphenicol administration. While in circulatory failure, the blood pressure goes down considerably and the pulse is weak, fast and feeble ; in collapse due to chloramphenicol administration the blood pressure does not go down considerably and the pulse is not so fast and feeble as observed in circulatory failure. 177 cases had this complication out of which 112 died giving a high case fatality rate of 63·2 per cent, although this complication was noticed in 8·6 per cent of the total cases.

Haemorrhage per rectum—This complication was noticed in 165 patients out of which 21 died giving a case fatality of 12·7 per cent. The percentage of the occurrence of this complication was 7·8 per cent.

Meningism—This was noticed in 70 cases out of which 23 died giving a case fatality rate of 32·8 per cent.

Retention of urine—35 cases suffered from retention of urine.

Perforation—This complication was noticed in 27 cases. 17 cases died giving a case fatality rate of 62·9 per cent.

Parotitis—This complication was observed in 25 cases only

Peripheral neuritis—2 cases had this complication and both were discharged cured.

Nausea and vomiting were observed in a large number of cases and these were checked promptly with heavy doses of vitamin B complex.

No complication of bones, joint and muscles was noticed ; but a few, about 15 patients, had bed sores.

RELAPSE

Relapse was noticed in 161 cases out of which 10 died giving a case fatality rate of 6·2 per cent. Out of 161 cases of relapse, 114 cases were treated with chloramphenicol.

TREATMENT

Nursing—In no disease is good nursing as urgently required as in enteric group of fevers.

Diet—It is not possible for our climate and structure to feed a patient with 4000 calories per day but as far as possible we should maintain a diet rich in calories. In this Hospital, an enteric fever patient is given a diet of about 2300 calories in the beginning. This is served in the form of milk, barley and glucose drinks, pudding, soft rice and mashed potatoes. The caloric value of such a diet varies between 2127 calories to 2399

calories according to the supply of eggs to the patient. The quantity of protein is 71·4 g., carbohydrate 198·7 g. and fat 104 g. This diet is served to the patients till the temperature comes down and is continued for seven days after it touches normal. Then this is changed into a diet which gives approximately 2027 calories by means of milk, rice, butter, bread and dal. This diet contains 69 g. of protein, 232·3 g. of carbohydrates and 90 g. of fat. Although the caloric value of this diet is diminished the psychic effect of satisfaction in a patient with the supply of rice and dal is markedly noticed. This diet is given for 4 to 6 days and is then changed into full diet which contains 2608 to 2674 calories. This full diet is supplied to the patient till discharged. The patient is discharged when he is apyrexial for about 20 days.

The diet supplied to the patients with the complications of diarrhoea or meteorism is apple pulp, banana pulp, barley water and albumin water till diarrhoea is checked or meteorism subsides. Then these patients are given only milk diet for about 4 days, followed by a high caloric diet.

Patients suffering from haemorrhage or perforation are completely starved. A patient with haemorrhage is served with apple pulp on the third day after the haemorrhage is checked. To start with he is given 1 oz. of apple pulp every four hours. Then he is treated on the same lines as in the complication of diarrhoea or meteorism.

Specific treatment—This consisted in administration of chloramphenicol.

TABLE 3—SHOWING CASES TREATED WITH CHLORAMPHENICOL

Year	No. of cases treated	No. of cases expired	Case fatality rate (per cent)
1950 ...	117	52	43·6
1951 ...	301	35	11·2
1952 ...	640	143	22·3
1953 ...	1264	127	10·0

From Table 3, it can be seen that the case fatality rate was the lowest in the series under observation as the drug was administered comparatively earlier in the disease.

In the series under observation, during the first 6 months, the drug was administered in four hourly doses while in the later six months the drug was administered in twelve hourly doses. Four hourly doses: 500 mg. (2 capsules) every four hours till the temperature touched normal and then 2 capsules six hourly for four days and then 1 capsule six hourly for four days. In general the administration was continued for about 12 days from the start.

In the later half of the period under observation, 12 hourly doses were prescribed in the following way: 3 capsules at an interval of 12 hours were administered till the temperature touched normal and then 2 capsules at an interval of 12 hours for four days and then 1 capsule at an interval of 12 hours for four days. On an average the duration of the administration of the drug was also 12 days in the later half of the period under observation. In the first series i.e., four hourly doses, there were 64 deaths amongst 467 cases treated with chloramphenicol while in the second series i.e. 12 hourly doses there were only 63 deaths out of 797 cases. Thus it can be seen that the 12 hourly doses yielded better results than four hourly doses. The main advantages of 12 hourly doses are: (1) less interference with the patient's rest, (2) a better response with 12 hourly doses than four hourly doses (3) total expenditure with the drug less than the total expenditure with four hourly doses and (4) less work for already overworked nursing staff.

During chloramphenicol administration, vomiting was one of the main complications noticed. This was treated successfully with the administration of vitamin B complex, parenterally or orally. Anaemia was also observed in a number of cases treated with chloramphenicol; however, no case of aplastic anaemia was observed. 3 or 4 cases developed drug rash which disappeared on stopping the drug.

The incidence of relapse relative of chloramphenicol treated cases is considerably high. Out of 161 cases of relapse relative of enteric fever, 114 cases were those who were treated with chloramphenicol.

To check the high rate of relapse T.A.B. inoculation was lately introduced into the hospital. T.A.B. inoculation is done on the fifth day of apyrexial period, 0·5 c.c. of T.A.B. being given subcutaneously. Only 1 relapse occurred in these 67 cases.

Treatment of complications—Toxaemia was treated by administering the plasma substitute P.V.P. (Polyvinylpyrrolidone). 289 cases were treated with P.V.P. with good results. The whole blood transfusion was required to be given in 4 cases of toxaemia all of them responding favourably.

BRONCHOPNEUMONIA: Those cases which were not treated with chloramphenicol, penicillin was given with very good results.

HAEMORRHAGE : As soon as intestinal haemorrhage occurred, it is a routine in this hospital to give hemostatic products, morphia to prevent shock, blood transfusion or plasma substitutes. Blood transfusion was required to be given in 102 cases. Out of these 102 cases, 30 died.

DIARRHOEA AND DEHYDRATION : Diarrhoea was treated symptomatically with bismuth, kaolin, kaolin retention enema etc. Dehydration was treated with protein hydrolysate transfusions with good results.

PAROTITIS : This was treated with sulpha drugs or penicillin.

PERFORATION : This complication was treated with continuous suction of the stomach (Wengenstedt's apparatus), replacement of fluid and the head of the bed raised so as to localize the peritonitis. The patient was immediately transferred to the General Hospital for necessary surgical treatment.

CIRCULATORY FAILURE : The treatment of circulatory failure depends on whether it is acute circulatory failure or chronic circulatory failure i.e. congestive heart failure. Congestive heart failure is extremely rare except in cases of pre-existing heart disease. In such cases the treatment is that of congestive heart failure i.e. complete rest, restriction of sodium and digitalis therapy.

Acute circulatory failure in typhoid fever is usually mainly the result of toxaemia, dehydration or haemorrhage. When it is due to toxaemia, then plasma substitute is given ; the quantity depending upon the age of the patient and the toxicity. When it is due to dehydration, usually glucose saline is administered, the quantity depending upon the age and the state of the dehydration. When the circulatory failure is due to haemorrhage, blood transfusion is indicated. Furthermore, acute circulatory failure is combated by injection of percorten 5 mg., 8 hourly, Inj. nikethamide 4 hourly, continuous oxygen, hot water bags, raising the foot of the bed etc.

ANAEMIA : Anaemia was generally treated with iron therapy. However, in some cases iron therapy was supplemented by liver therapy.

Summary

(1) Observations have been made on complications and treatment of enteric group of fevers based on 2056 cases treated at the City Fever Hospital, Arthur Road, Bombay.

(2) Case fatality rate was 10 per cent and excluding the moribund cases the case fatality rate was 7·2 per cent.

(3) Chloramphenicol administered in a large number of patients and earlier in the disease, reduced the case fatality rate considerably.

(4) 12-hourly doses of chloramphenicol gave better results than 4-hourly doses of chloramphenicol.

(5) T.A.B. inoculation reduced the relapse rate.

ACKNOWLEDGMENT

I am thankful to Dr. R. B. Sawardekar, Jr. Resident Medical Officer, Arthur Road Hospital, Bombay 11, for helping me in compiling the statistical information.

REFRESHER COURSE

TREATMENT OF PYOGENIC MENINGITIS

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The treatment of pyogenic meningitis has undergone a revolution since the advent of the chemotherapeutic group of drugs. Not only the prognosis is brighter but there is a definite decline in the case incidence because of high prophylactic value.

The organisms responsible for pyogenic meningitis are in order of their frequency—Meningococci, pneumococci, streptococci, staphylococci, etc. Of these the first two are the commonest.

Treatment

The line of treatment may be divided into (1) general, (2) specific, and (3) symptomatic including treatment of any complication that may subsequently arise.

GENERAL TREATMENT :

Isolation—In case of meningococcal meningitis it is always safe to isolate the patient and keep the patient in isolation till complete recovery which takes roughly about 3 weeks. So far as other varieties of pyogenic meningitis are concerned the patient should be kept in isolation as far as possible. Strict isolation is not an absolute necessity.

Bed—The bed should be soft and thick covered with rubbercloth. The sides of the cot should be well protected so that the patient does not fall down while in a restless or violent state.

Ice cap—An ice cap when necessary should be used till the patient becomes conscious. If the temperature comes down but the patient remains unconscious ice cap should not be withdrawn.

Care of eyes—The eyes should be regularly washed with tepid normal saline and mercurochrome or argyrol lotion should be dropped or some ointment containing mercury or penicillin or sulphadiazine should be applied.

Prevention of bed sores—There is a chance of developing rapid bed sores, so every possible care should be taken to guard against them by frequent change of posture and proper care of the skin.

Nutrition—The question of supplying adequate amount of nutrition is of the utmost importance. Those who are conscious and are able to retain food should be encouraged to drink sufficient quantity of fluids, milk, barley water ; glucose water, orange juice, hydroproteins, vegetable broth etc. Those who are unconscious, should be fed through the gastric tube inserted through the nose. In case of vomiting intravenous glucose, hydroprotein and sometimes normal saline is to be administered. Rectally normal saline with 5 per cent glucose by drip is recommended.

SPECIFIC TREATMENT :

Sulpha group of drugs—The drug of choice in the treatment of pyogenic meningitis is the sulpha group of drugs which must be pushed in sufficient amount within a comparatively shorter time. But in severe types of infection sulpha group of drugs in association with one or two antibiotics may be used.

In case of meningococcal meningitis sulphadiazine or sulphamezathine should be preferred. Sulphapyridine is better in pneumococcal meningitis. 2 g. of sulphadiazine sodium diluted with glucose or saline or with both should be given intravenously. Subsequently 1 g. is repeated every 6 hours for 24 to 48 hours.

Sulphadiazine sodium can be had in liquid form whereas sulphapyridine sodium is obtained in powder form which has got to be dissolved in pyrogen-free water first, and then subsequently if necessary, should be mixed up with glucose etc. If one tries to dissolve sulphapyridine sodium in glucose a turbid solution will be formed which cannot be injected intravenously.

Within the course of 2 days on an average about 9 g. of sulphadiazine sodium is injected intravenously. In average cases improvement is noticed within 48 hours. The dose is then reduced and the drug is given three times a day or twice a day till on an average a total dose of about 16 g. (minimum 12 g. maximum 24 g.) is reached. As soon as injections are reduced sulphadiazine tablets are administered by mouth, 2 tablets (1 g.) for one dose—generally 4 times a day for about 3 or 4 days, then subsequently three times a day for 2 days, then twice a day till on an average the total dose of about 40 to 50 tablets or 20 to 25 g. is reached.

During sulpha treatment a careful watch should be kept upon urine output ; if much reduced, sulpha should be withheld.

Excessive pruritus during sulpha treatment calls for stoppage of the drug.

Antibiotics—Whenever the patient presents severe manifestations it is preferable to commence the treatment with at least 2 drugs—sulpha and penicillin. 25-50,000 units of penicillin dissolved in about 4 to 5 c.c. of pyrogen-free water is injected intrathecally after required amount of C.S. fluid is withdrawn. The solution is slowly allowed to gravitate down the lumbar puncture needle. After sealing the puncture the foot end of the bed is slightly raised so as to allow the penicillin to flow towards the cranium.

Penicillin is also injected intramuscularly every 6 hours so that a daily dose of 10 lacs of penicillin is given for 6 to 10 days. The dose is gradually reduced, till a dose of 50 to 80 lacs is reached. During this whole period in average cases 2 or 3 lumbar punctures may be required ; in some cases only one lumbar puncture is sufficient. Each time a lumbar puncture is performed, 25 to 50,000 units of penicillin is put in intrathecally.

In severe types of cases e.g. in fulminating types of meningitis, a combination of penicillin and streptomycin is administered together in doses of 2½ lacs of penicillin mixed with ½ g. of streptomycin intramuscularly every 6 hours for the first two days. Subsequently, streptomycin ½ g. 3 times a day along with penicillin for next two days in continued ; thus within the course of 4 days a total dose of 40 lacs of penicillin and 7 g. of streptomycin is administered intramuscularly ; next streptomycin is injected in ½ g. dose twice daily till on an average about 12 g. of streptomycin is reached.

Oxytetracycline may be used with considerable advantage in pneumococcal infection. 250 mg. of oxytetracycline is dissolved in 10 c.c. of pyrogen-free water and then diluted with glucose so as to make it upto 100 c.c. to 200 c.c. as required. The solution is given intravenously very slowly through the drip tube. Injections may be repeated after 12 hours or occasionally after 8 hours till 4 to 6

doses are administered. As soon as improvement is found the patient becomes conscious and is able to swallow oxytetracycline capsules are given per mouth. Of course during this treatment the sulpha and penicillin treatment is not withheld.

SYMPTOMATIC TREATMENT :

The symptoms and signs that call for immediate attention are restlessness, delirium, violence and occasional convulsions. Though lumbar puncture will relieve most of these signs immediately it is better to use some sedatives. The sedatives that are mostly in use are paraldehyde 10-15 c.c. intramuscularly, luminal 3 gr. intramuscularly or pethidine hydrochloride 100 mg. to 150 mg. as required.

When there is low tension and volume particularly in cases where there has been depression of the vasomotor system administration of stimulants are required. Nikethamide, ephedrine, every 6 hours or 8 hours or atropine, nikethamide, posterior pituitary and cortical extracts may be injected. As dehydration is a frequent feature in a case of meningitis, normal saline, glucose and sometimes plasma substitutes have to be administered to maintain the fluid balance.

Glucose is generally administered in 50 per cent solution when the intracranial tension is high—subsequently 25 per cent solution 100 c.c. or occasionally 200 c.c. intravenously is sufficient.

Other drugs that are generally put in intravenously along with glucose and sulpha are vitamin C 500 mg. and calcium gluconate 10 per cent solution 10 c.c.

Irregular breathing and other abnormal types of respiration are dealt with by lumbar puncture.

Abdominal distension may be relieved by bowel wash and injection of neostigmine bromide along with vitamin B_1.

Retention of urine may be relieved by alternate hot and cold application over the hypogastric region and ice suppository per rectum.

Occasionally slight residual temperature persists for some time. Such cases respond favourably to nonspecific protein therapy.

The prognosis of pyogenic meningitis in children is rather grave. Intravenous sulpha cannot always be successfully injected. Moreover very frequently organisms become resistant and the disease turns chronic with fatal results. In such cases after the initial response with penicillin and streptomycin, it is better to continue the treatment with some broad spectrum antibiotics.

TUBERCULOUS MENINGITIS

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Tuberculous meningitis is a disease in which the outlook has been completely changed by modern therapy. It was almost invariably fatal, but is now curable if treated early and properly. Hence great responsibility lies on us in making an early diagnosis. In the diagnosis of a disease, the first requisite is suspicion of the condition if there are reasons for it. Once the suspicion has been aroused, one has to look for the signs of the disease and carry out relevant investigations. In the diagnosis of tuberculous meningitis similar mental process works.

Tuberculous meningitis is usually a disease of infants, children and young adults. Middle aged persons may also suffer from it. In infants and children the primary focus in the lung, is the usual source of tuberculous meningitis. The danger period after primary infections is between three months and one year. The other areas of primary source for tuberculous meningitis are lymph glands, bones, kidneys, the peritoneum and the intestine. Chronic pulmonary tuberculosis does not usually give rise to tuberculous meningitis. In some cases a past history of pleurisy is obtained. Tuberculous meningitis may or may not be associated with miliary tuberculosis of the lungs. It is said that the prognosis is not very much altered by the combination. In some cases the primary source of the disease remains undetected.

The onset of the disease is usually insidious. In case of children great importance is placed on the alteration in the mental condition which is taken as one of the early manifestations of the disease. A child who was healthy and playful and who used to enjoy his food, becomes morose, reticent, irritable or quarrelsome and refuses food. Headache is an important symptom, but children may not complain of it. There may be vomiting, more commonly in children. Fever is usually present, but may not be high. It usually varies between 100°F. and 102°F., the higher level being towards the evening. A certain amount of lethargy and drowsiness is usually present. The patient may complain of diplopia due to involvement of the oculo-motor nerves. Urinary disturbance is quite common and there is often retention of urine.

Even at this stage, signs of meningitis are present. These are neck rigidity and positive Kernig's sign. Unfortunately these two very

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simple tests are not carried out as a routine during the examination of a febrile patient. The other signs are non-specific and may not be present. These are diminished deep reflexes and diminished or absent abdominal reflex. Ophthalmoscopic examination should be made as a routine. It may confirm the diagnosis by revealing choroidal tubercles. It is, however, a rare finding, and the tubercles are not expected unless there is miliary tuberculosis. If there is associated miliary tuberculosis of the lungs, the respiratory rate will be hurried. There may be cyanosis and rhonchi and crepitations may be heard over the lungs. Miliary tuberculosis of the lungs is however best diagnosed by skiagraphy of the chest. A search should be made for tuberculous lesions in other parts of the body, viz., glands, bones, abdomen. An enquiry should also be made regarding any history of contact with a tuberculous patient. It will be available in certain percentage of cases.

At this stage, the most important and essential investigation is lumbar puncture. To delay or to avoid a lumbar puncture in a case of suspected tuberculous meningitis would amount almost to criminal negligence. The cerebrospinal fluid is clear and is under tension. A cobweb coagulum often forms at the bottom of the test-tube, when the fluid is allowed to settle. Protein content is increased to 50 to 100 mg. or more per 100 ml. of fluid (normal 20 to 40 mg. per 100 ml.). Great importance is placed on the reduction of sugar and chloride and more so on the former. The sugar content is often reduced to 50 mg. or less (normal 80 to 100 mg. per 100 ml.) and chloride to 650 mg. or less per 100 ml. (normal 725 to 750 mg. per 100 ml.). Lymphocytes are increased in number and may be 200 or more per c.mm. (normal 5 cells per c.mm.). If sufficient time is spent on the search for tubercle bacilli in the smear of contrifuged deposit or of the cobweb coagulum of cerebrospinal fluid, the organism will be found quite often. Successful results have been claimed in about 70 per cent of cases. It is worth spending time on this examination as finding of one tubercle bacillus is worth more than hundred symptoms and signs. Guinea-pig inoculation or culture of C.S.F. may be helpful in finding the organism but the procedures are time-consuming and the question of waiting for the report in instituting specific therapy should never arise. X-ray examination of the chest should always be made, as in a case of suspected tuberculous meningitis, evidence of miliary tuberculosis of the lungs would almost make the diagnosis definite and presence of tuberculous lesions in lungs, pleura or mediastinal glands would make it highly probable. X-ray examination will also help in demonstrating tuberculous lesions in bones and kidneys. There is no specific change in blood count. E.S.R. of blood is always raised. Mantoux test is useful in infants, children and young adults. It is positive in more than 90 per cent of cases of tuberculous meningitis. The usual dilution of tuberculin for the test is 1 in 1000. If that is negative, 1 in 100 dilution should be tried.

If the disease is allowed to progress without specific therapy, the patient gradually goes in deep coma. There may be delirium or convulsions. Neck rigidity increases. Plantar reflex becomes extensor, and cranial nerve lesions are evident. In days when there was no specific therapy for tuberculous meningitis, merciful death used to cut short the agony of the patient, usually in the fourth week of the illness.

Differential Diagnosis

Enteric fever—It is much more common than tuberculous meningitis and may cause difficulty in diagnosis as insidious onset, headache, continuous fever and stupor are common to both. The confusion is greater if there is meningism in a case of enteric fever. Examination of the C.S.F. will differentiate the conditions. In enteric fever the C.S.F. is essentially normal. The pressure may however be raised if there is meningism. The spleen is usually enlarged and rose spots may be found in enteric fever. Widal test and blood culture will also help. Moreover with chloramphenicol, the pyrexia of enteric fever usually begins to subside within four days.

Pyogenic meningitis—It is much more acute in onset and toxaemia is greater than in tuberculous meningitis. Blood shows leucocytosis, the C.S.F. is purulent and the causative organism is usually found in smear examination. The fluid may have to be cultured to isolate the organism.

Poliomyelitis—Poliomyelitis gives rise to headache, vomiting, fever, stupor and neck rigidity. Kernig's sign is usually positive. Till paralysis sets in, it may be very difficult to differentiate it clinically from tuberculous meningitis. Lumbar puncture will be of definite help. In poliomyelitis, though there is rise in pressure, protein content and lymphocytic count, there is no diminution of sugar or chloride content of C.S.F. In blood there is usually leucocytosis.

E. coli—This infection of the urinary tract does not give rise to rigidity of neck, nor is there positive Kernig's sign. The C.S.F. is normal and the diagnosis is confirmed by examination of the urine. It contains plenty of pus cells and causative organisms may be grown on culture.

Cerebral tumour—Headache and vomiting in a young adult may be taken to be due to cerebral tumour. If there is associated fever, cerebral abscess may be suspected. Cerebral tumour is usually an afebrile condition, and papilloedema is often present. Neck rigidity and Kernig's sign are usually absent in cerebral tumour or in cerebral abscess. In tumour, it may be dangerous to make a lumbar puncture and it should be avoided. In cerebral abscess, the C.S.F. contains pus cells but organisms are usually absent in it.

A child suffering from tuberculous meningitis, may be brought for the treatment of vomiting. On careful examination the neck is found to be rigid and Kernig's sign is positive. Fever is also present. If there is slightest suspicion of tuberculous meningitis, a lumbar puncture should be made to settle the diagnosis.

Prognosis

The most important point in determining the prognosis of a case of tuberculous meningitis is the stage of the disease in which specific therapy has been started. Most cases of tuberculous meningitis can be saved if treated early and properly. However, no patient is too ill to be left without specific treatment. We have seen unconscious patients with marked emaciation, bed sores and incontinence of urine to recover with anti-tuberculous drugs. Sequelae like mental changes, optic atrophy, deafness and hydrocephalus have been noted in tuberculous meningitis, but in what percentage of cases they occur is not known. Deafness in tuberculous meningitis is said to be more an effect of streptomycin than of the disease itself. In this respect, dihydrostreptomycin is a worse offender than streptomycin. Long-term prognosis of the disease is also not known. There have been relapses in arrested cases of tuberculous meningitis, but the relapse rate has not yet been established. Naturally, one is at a difficulty to make out how long a case of tuberculous meningitis is to be treated with specific drugs.

Treatment

Introduction of streptomycin to therapeutics was the first advancement in the treatment of tuberculous meningitis. It was soon found out that the drug did not cross the blood-brain barrier. Though a little of it reached the C.S.F. through inflamed meninges, the concentration of the drug never attained therapeutic level. So streptomycin was given intrathecally, along with usual intramuscular injections. The results were definitely better and the routine was to give intrathecal injections on about 75 per cent of the days on which intramuscular injections were given. Obviously, it was a heroic and even inhuman treatment and it put great strain on the medical and nursing personnel and on the patient and his relations. Often spinal block developed due to irritation produced by intrathecal streptomycin, necessitating stoppage of this route of administration.

Para-aminosalicylic acid (P.A.S.) has been used in combination with streptomycin to hinder the development of resistant strains of tubercle bacilli. Alone, it is not of much value in the treatment of tuberculous meningitis. Real advance in the treatment of the disease came with the discovery of isonicotinic acid hydrazide. The drug has been a boon to tuberculous patients. It is cheap, is given orally and is almost free from toxic symptoms. Its greatest advantage in tuberculous meningitis is that sufficient concentration of the drug reaches the cerebrospinal fluid. Since its introduction in the therapy of tuberculous meningitis, intrathecal streptomycin has almost been abandoned or the course has been much reduced.

To start with, all cases of tuberculous meningitis should have streptomycin intramuscularly and isoniazid and P.A.S. orally. In cases with stupor, incontinence of urine or marked neck rigidity or when the duration of the illness has been more than a week, streptomycin should also be given intrathecally. The dose of streptomycin for an adult is 1 g. intramuscularly daily and 100 mg. intrathecally. Intrathecal injections are given daily till the patient becomes conscious and there is improvement in general condition. Later it may be given on alternate days and ultimately stopped as soon as possible. The dose of isoniazid is 3 to 5 mg. per kilo body weight per day given in two equal doses. For an adult 100 mg. 2 to 3 times a day should be enough. P.A.S. is given in doses of 2 g. 5 to 6 times a day after meals. The three drugs, i.e., streptomycin, isoniazid and P.A.S. are continued for three months. In cases where there has been marked improvement, streptomycin may be given on alternate days instead of daily. This change should not however be made within two months of the start of treatment. After three months of combined treatment, a combination of two drugs should be given in cyclic order, e.g., streptomycin and isoniazid for two months, isoniazid and P.A.S. for two months, P.A.S. and streptomycin for two months and so on. As stated before, it is not known, how long this specific therapy should be continued. In order to avoid relapses, it may be a good plan to administer these antituberculous drugs for about a year after the subsidence of activity of the disease as made out by absence of symptoms and signs, and return of E.S.R. and C.S.F. to normal levels. Great im-

portance is placed on the sugar content of C.S.F. and as long as it is less than 50 mg. per 100 ml., the disease is taken to be active. Not much value need be placed on slight rise of protein content or cell count of C.S.F. if the sugar content returns to the normal level. The dose of these anti-tuberculous drugs for infants is about one-fourth the adult dose, for children half the adult dose and for adolescents two-thirds the adult dose. To patients above the age of 16, the adult dose may be given. It should be noted that these dose schedules and duration of specific therapy are rough guides and each case should be judged on its own merits.

Nutrition of the patient should be maintained by proper feeding which in the stage of drowsiness or coma is best given by intragastric drip. The feed consists of milk, fruit juice, glucose, egg, etc. As soon as the patient becomes conscious, nourishing diet containing sufficient calories, protein and vitamins should be given. Headache, if not relieved by analgesic drugs, may need occasional lumbar punctures. Hypnotics like chloral hydrate, bromides, barbiturates, paraldehyde, etc., may have to be given for insomnia. Morphine is best avoided. Convulsions should be controlled by intramuscular paraldehyde and lumbar puncture. The adult dose of paraldehyde varies from 7 to 10 ml. Retention of urine should be relieved by catheterization with proper aseptic precautions. Development of bed sores should be prevented by frequent changing of posture and attention to pressure points. Emaciation, anaemia and bed sores often respond very well to repeated small blood transfusions. Iron should also be given for anaemia. Convalescence in tuberculous meningitis should never be hurried. Cases have to be kept under observation for years after apparent recovery. Their general health should be maintained at the highest level. If there is any suspicion of relapse of the disease, a lumbar puncture should be made. If the fluid is suggestive of tuberculous meningitis specific therapy should be immediately started. As the prognosis of relapse of tuberculous meningitis is not good, the aim should be to prevent relapse.

In conclusion, it may be stated that in tuberculous meningitis, our aim should be not only to make a diagnosis but to make an early diagnosis. The disease has to be suspected from symptoms and neck rigidity looked for and Kernig's sign tested. In all suspected cases a lumbar puncture must be made to note biochemical and microscopical changes in the C.S.F. Sufficient time should be spent in the search of tubercle bacilli in the stained smear of centrifuged deposit or of the cobweb coagulum of the C.S.F. Treatment of the disease must be thorough, energetic and prolonged.

CASE NOTES

TYPHOID LIVER ABSCESS

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Liver abscess due to bacillus typhosus is very rare. McCrae (1925) stated that, "Eberts collected 30 cases, in 9 of which the typhoid bacillus was isolated from the pus. In about half the cases the right lobe was affected. Eighteen of the patients recovered."

The abscess may rarely be due to spread of infection by the hepatic artery. The usual route of spread is, however, by the portal vein and the hepatic abscess is associated with suppurative pylephlebitis. The infection may also be carried from the gallbladder by the biliary tract.

We record a case of liver abscess, the pus of which showed pure growth of bacillus typhosus.

Case Report

A married man, aged 25 years, was admitted in the hospital on 31-1-54 with history of intermittent fever and pain in right hypochondrium for four days. The fever used to come with chill and rigor and subside with sweating. The pain was localised to the right hypochondrium and had no relation to food. It became very acute on the day of admission. Four months earlier the patient had suffered from enteric fever for which he had 12 g. of chloramphenicol. Though the fever was controlled with it, he was never completely well and used to get dull pain in the right hypochondrium. There was no past history of amoebiasis, gallbladder colic or peptic ulcer. The patient was markedly emaciated, and moderately anaemic and jaundiced. Temperature was 103°F, pulse was 120 and respiration 28 per minute ; blood pressure was systolic 90 mm. of Hg. and diastolic 60 mm. of Hg. The right hypochondrium was markedly tender. The liver was enlarged to 2 fingers breadth below the costal margin. It was soft and tender. The spleen was palpable 2 fingers breadth below the costal margin. It was firm in consistency. There was no ascites. No abnormalities were detected in other systems.

Blood : Hb. 9 g. per cent ; red cells—3,500,000 per c.mm. ; white cells—19,000 per c.mm. with neutrophils 92 per cent, lymphocytes 8 per cent. No malarial parasites.

Total protein 5·25 per cent with albumin 3·41 per cent and globulin 1·84 per cent.

van den Bergh's test—immediate direct positive ; bilirubin 4 mg. per cent ; icteric index 35 units.

Wassermann reaction—negative ; agglutination tests—TH, positive 1 : 250 ; TO, 1 : 125 ; Vi 1 : 1280.

Bile salts and pigments were detected in the urine. No abnormalities were detected in the stools.

It was taken to be a case of liver abscess and the patient had emetine ½ gr. I.M. daily from 3-2-54 to 8-2-54. He had penicillin parenterally from 3-2-54 to 1-3-54. The drugs had no effect on the clinical course and the temperature of the patient used to vary between 103° and 98°F. Pleural friction sounds were heard on the right side on 6-2-54 and x-ray examination of the chest on 9-2-54 showed right-sided pleural reaction with slight collection of fluid at the base. He had streptomycin 1 g. I.M. daily from 9-2-54 to 9-3-54. There was fluid upto third right interspace and on 13th February 200 ml. straw coloured fluid was aspirated. It contained 126 cells per c.mm. (neutrophils 8 per cent, lymphocytes 92 per cent). The patient was afebrile from 14th to 19th February. Later he had intermittent fever which continued till 1st April. 350, 400, and 600 ml. of fluid were aspirated from the right pleural cavity on 22-2-54 and on 2-3-54 and 25-3-54 respectively. The character of the fluid was the same as that drawn out on 13th February. The condition of the patient gradually deteriorated, fluid in the pleural cavity reached the first interspace and on 8th March the liver was enlarged upto the level of the umbilicus. It was markedly tender and rub was felt and heard over it. On 9-3-54 a needle was put in the liver through the ninth space in the midaxillary line and 10 ml. of dark red material which looked like altered blood was drawn out with difficulty. Bacillus typhosus was isolated in pure culture from the material. The organism was isolated from stool but not from blood, urine or pleural fluid. The enlargement of the liver and hepatic rub persisted and another hepatic aspiration was unsuccessfully tried on 16-3-54.

On 17th March at about 8 P.M. the patient complained of agonising pain in the right hypochondrium and he was in great shock. There was no cough or expectoration. The incident was thought to be due to rupture of liver abscess in the peritoneal cavity. In addition to usual resuscitating measures he had transfusions of blood, 275 ml. on 18-3-54 and 300 ml. on 20-3-54. He was put on chloramphenicol 250 mg. every three hours on 19th March and it was continued till 27th March. He had by that time 15 g. of the drug.

On 22-3-54 one and a half pints of reddish fluid was drawn out from the peritoneal cavity. It contained plenty of red cells and a few pus cells and was sterile on culture. With chloramphenicol there was no improvement in the clinical condition. On 29-3-54 he again complained of severe pain in the left upper abdomen and left shoulder. The abdomen became distended, peristaltic sounds were absent and there was absolute constipation.

On 30-3-54, 300 ml. of ascitic fluid was drawn out. It contained plenty of pus cells but was sterile on culture.

He was again put on penicillin and streptomycin, but the condition deteriorated and he expired on 5-4-1954.

A partial autopsy was carried out. The liver was enlarged, congested and slightly bile stained. Several abscesses were present in both lobes of the liver. They projected above the surface and measured 1 to 2 cm. in diameter (Fig. 1, *vide* Plate). Bacillus typhosus was isolated from the material aspirated from the abscess cavities. On incising the liver it was found riddled with abscess cavities (Fig. 2, *vide* Plate). They were circular in shape and their diameters varied between 0·5 and 2 cm. The wall of the gallbladder was thickened and oedematous and material taken from the gallbladder showed bacillus typhosus on culture. On section the liver showed marked infiltration by mononuclear and polymorphonuclear cells of the bile channels and neighbouring liver tissue. Inspissated bile was present in the lumen of the channels (Fig. 3, *vide* Plate). There were signs of chronic inflammation in the gallbladder. Extrahepatic portion of the portal vein did not show any sign of inflammation. The bile duct on the other hand showed epithelial hyperplasia with round cell infiltration in subepithelial layer.

Discussion

The patient showed clinical features of liver abscess about four months after the onset of typhoid fever. The liver was probably affected earlier as he complained of dull pain over the liver within a week of the control of initial disease by chloramphenicol. During the course of subsequent illness the patient developed jaundice. The gallbladder and the bile duct showed signs of inflammation. The intrahepatic biliary channels were inflamed and contained inspissated bile. Bacillus typhosus was isolated from the pus of liver abscess, the stool and the material taken from the gallbladder. These features suggest spread of infection by the biliary tract. Blood culture was sterile and the extrahepatic portal vein did not show any inflammatory sign. These facts are against the possibility of spread of infection by the hepatic artery

Fig. 1—Abscesses projecting from the surface of right and left lobes of the liver. Some of them have been marked. The dark colouration of certain areas of the liver is due to postmortem staining.

Fig. 2—Vertical section of the liver showing multiple abscess cavities of varying size.

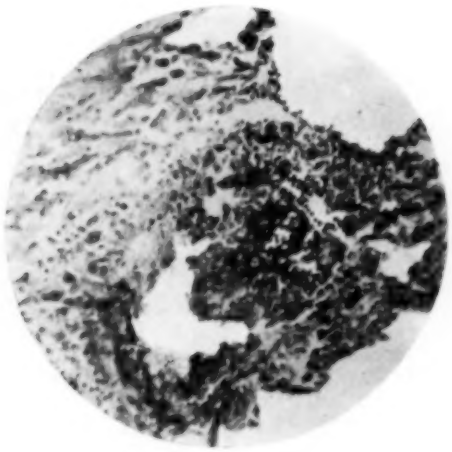

Fig. 3—Section of the liver showing inflammatory cells in the wall of a biliary channel and in the liver tissue. Inspissated bile is present in the lumen of the channel.

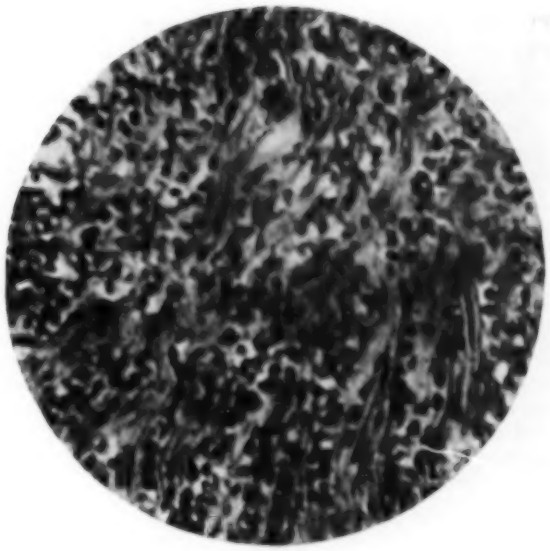

Fig. 4—Reticulosarcoma caecum (High power).

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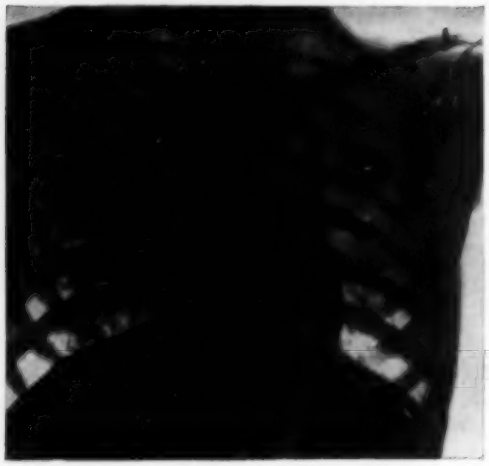

Fig. 1—Initial x-ray : Extensive bilateral infiltrations.

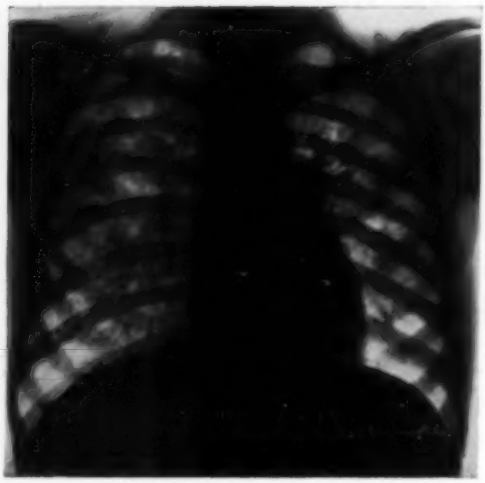

Fig. 2—After some chemotherapy lesions retrogressing. Signs and symptoms of kala-zar appeared after this stage.

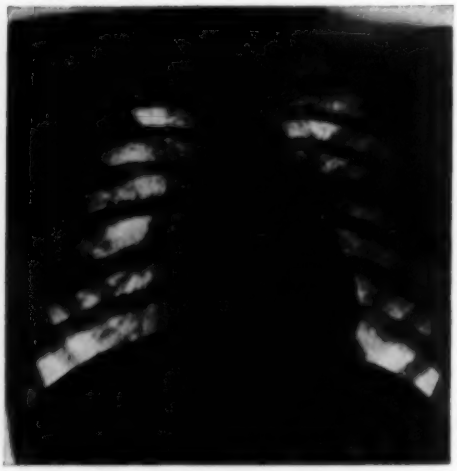

Fig. 3—Almost complete clearing of the lesions after a course of urea stibamine injections with usual antitubercular drugs.

Fig. 4—Showing blebs occupying the soles.

NAG AND GHOSE—*Kala-azar with Pulmonary Tuberculosis (pp. 138-39)*

SATYANARAYANAMURTHI—*Proflavine Sulphate Poisoning (pp. 139-40)*

or portal vein. Hepatic rub was very prominent in this case. We have not seen it in cases of amoebic liver abscess. The patient developed a very high titre Vi agglutinin in his serum. Chloramphenicol administered during the initial attack of typhoid fever controlled the disease but did not prevent the complication. It also did not have any effect on the liver abscess.

Summary

A case of multiple abscesses of the liver due to bacillus typhosus has been described.

The spread of the infection was by the biliary tract.

Acknowledgment

We are grateful to Dr. A. K. Dutta Gupta, Principal-cum-Superintendent, Nilratan Sircar Medical College and Hospital, for the permission to publish this case and to Prof. D. C. Lahiry for carrying out Vi agglutination tests. Our thanks are due to Prof. S. N. De and Drs. K. P. Sen Gupta, S. K. Ghose, N. B. Mohanty and P. Chatterjee and Messrs. K. Das and M. Mazumder for their help.

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RETICULOSARCOMA OF THE CAECUM

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Reticulosarcoma is considered by many as an undifferentiated form of lymphosarcoma. But others differentiate it from lymphosarcoma by the following features and suggest an independent form of malignant lymphoma or reticulosis :

1. Occurrence of mediastinal and splenic enlargement;

(2) Involvement of bone-marrow;

(3) Widespread dissemination without any relation with continuity of lymph or bloodborne route of metastasis and

(4) Termination of some cases in monocytic leukemia.

Reticulin fibrils in reticulosarcoma are scanty in the most immature and undifferentiated types and a little more plentiful in the more differentiated ones, these are however scanty compared with Hodgkin's disease.

In most cases of reticulosarcoma, lymphnodes are the main sites to be affected. Rarely, other tissues may also show the lesion e.g., spleen, skin, bone, liver etc. But, reticulosarcoma of intestine is the rarest of all visceral manifestations of the lesion and thus liable to escape proper diagnosis.

The following case is reported for its rarity.

Case Report

S. Debi, 32, H.F., admitted in B. F. Hospital on 24-5-54 with the complaint of pain in the epigastrium. For about 6 months she was suffering from pain in the epigastrium and around the umbilicus which used to increase after meals and be relieved by vomiting.

On examination a hard mass was felt in the right lumbar region. The mass was slightly moveable and of the size of a small orange and tender; liver, spleen—N.A.D.; heart, lungs, urinary system—N.A.D.; P.V. and P.R. examinations—N.A.D. Direct van den Bergh—negative. W.B.C.—10,000 per c.mm. with polymorphs 54 per cent, lymphocytes 36 per cent, monocytes 4 per cent and eosinophils 6 per cent. Kahn test—negative. Stool examination showed the presence of cysts of *E. histolytica*. Gastric analysis showed isochlorhydria.

Clinical diagnosis was gastric ulcer with lump in the right iliac fossa (? amoeboma).

The patient was operated on 4-6-54. Right-sided hemicolectomy and transverse ileostomy was done. Cholecystectomy was also done for the presence of stone in the gallbladder. The patient died on 7-6-54.

Gross appearance of the removed colon—The whole of the caecum and the adjacent ascending colon extending for 2" showed great thickening of the wall. The thickest part was the wall of the caecum at its middle part and was three-fourths of an inch in thickness and hard in feel, the mucosal appearance was absent and the lumen was extremely narrow. Section was taken from the thickened wall of the caecum for histopathological examination.

Microsection showed (Fig. 1, *vide* Plate) proliferation of reticulum cells replacing the normal structure of the intestine. The neoplastic cells had large hyperchromatic nuclei and pointed irregular cytoplasmic processes. The characteristic features were that many of these malignant cells had pleomorphic character of their nuclei and the cytoplasmic prolongations of the cells from anastomosing strands. The stroma was somewhat increased. There were a few tumour giant cells. Some of the reticulin fibrils progressed to collagen fibres. There was absence of varying number of eosinophils, polymorphs, plasma cells and lymphocytes (which is characteristic of Hodgkin's disease).

Acknowledgment

I acknowledge my thanks to Dr. S. N. Roy, Teacher of Surgery, for allowing me to study the case notes and to Dr. S. N. Choudhury, Civil Surgeon, for permission to utilise the hospital records.

KALA-AZAR WITH PULMONARY TUBERCULOSIS

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AND

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Combination of kala-azar with pulmonary tuberculosis is not very commonly seen. This combination is usually considered fatal (Napier, 1943) especially if there is extensive lung involvement. Antimony preparations are as a rule contraindicated (Banerjee and Bhattacharya, 1952) in these cases as it is usually believed that trivalent and pentavalent compounds of antimony cause fatal flare up and rapid spread of tuberculosis (Banerjea 1952, Sengupta 1945, Rogers 1952). The aromatic diamidines such as stilbamidine and pentamidine are found to have no deteriorating effects on tuberculous lesions and are usually used with impunity in the treatment of kala-azar complicated with pulmonary tuberculosis. During the last decade several chemotheraputic drugs against tuberculosis have been discovered which have considerably changed the outlook of all tuberculous patients in general.

We are reporting the following case to signify that these drugs have also brightened the outlook of patients suffering from pulmonary tuberculosis with kala-azar.

Case Report

P.G.S., 25 years old, rural, single Hindu, male, was admitted in a Chest Hospital in Calcutta on 1-3-54 with complaints of irregular fever (99-103°F), unproductive cough and progressive loss of weight for 6 months. There was no significant history of previous illness. Had an enteric-like fever in October, 1953. The temperature that was ranging between 101 and 103°F then subsided after about a fortnight's treatment by a Kaviraj. The fever recurred again after about a month with cough and gradual wasting. The fever was fairly high (102-103°F) and continued for about 2 months. He now consulted a local doctor who had an x-ray done and found extensive infiltrations in both the lungs (Fig. 1, *vide* Plate). Sputum was not examined for acid-fast bacillus. He had streptomycin 38 g. and P.A.S. 500 g. with good results. Fever and other symptoms were controlled to a great extent. He was then admitted in the hospital.

On admission, the patient looked pale and emaciated with dry skin, maximum temperature ranging between 99-100°F. The spleen was enlarged 2 fingers below the costal margin, firm; the liver 3 fingers below the costal margin, firm and not tender.

Acid-fast bacilli were not found in the sputum (direct smear); E.S.R. 65 mm. 1st hour (Westergren); W.B.C.—4,200/c.mm. with polymorphs 55 per cent, lymphocytes 40 per cent, eosinophils 4 per cent, monocytes 1 per cent; R.B.C.—3·5 m/cmm.; Hb. 55 per cent; x-ray showed fair amount of improvement in the lung lesions as compared to the initial skiagram (Fig. 2, *vide* Plate).

Streptomycin 1 g. daily and P.A.S. 10 g. (2½ g. 4 times a day) with sanatorium regime was continued. 5 days after admission the temperature began to rise steadily and after about 2 weeks it was very high (103-104°F) with further wasting of the patient. Isonicotinic acid hydrazide (I.N.H.) 50 mg. thrice daily was tried in addition but to no effect. The temperature rose to a higher level and *pari passu* the liver and the spleen increased in size, the latter reaching below the umbilicus in a short period.

Blood film did not show any malarial parasite but aldehyde and Chopra's tests were strongly positive. Sternal puncture was not done.

The patient was put on pentamidine isothionate injections (I.M.) every alternate day. Six injections were given without any response on the course of the illness. The condition of the patient was deteriorating rapidly and as a desperate measure urea stibamine (I.V.) was started, beginning with a very small dose (0·025 g.) and gradually worked up to the maximum dose (0·2 g.). Total about 2 g. was given. It had a remarkable effect on the temperature and general condition of the patient with gradual recession of the spleen and liver. Antibiotics and chemotherapy against tuberculosis were continued all along. Ultimately not only kala-azar but also the lung disease was controlled within a period of 6 months (Fig. 3, *vide* Plate) with regaining of normal weight, blood condition etc. He is now almost fully rehabilitated and is again a useful member of the society. He was discharged from the hospital on 27-8-54.

Discussion

Though there is no parasitological proof, the clinical and radiological evidences combined with the therapeutic response of the patient in course of about 6 months to anti-kala-azar drugs have proved beyond doubt that this is a case of kala-azar with pulmonary tuberculosis. The absence of acid-fast bacilli in the sputum even with extensive lesions in the lung could be due to the administration of large dose of antibiotics and chemotherapy before admission into the Hospital. It is not known that L.D. bodies can produce such extensive infiltrations in lung as is shown in this case. The aromatic diamidines though the drug of choice in kala-azar complicated with

pulmonary tuberculosis, proved ineffective in this case and pentavalent antimony compounds when administered carefully under cover of the modern antibiotics and chemotherapeutics against tuberculosis, achieved very good results (without any set back to tuberculous lesions) with ultimate control of kala-azar. Further, modern chemotherapeutic drugs against tuberculosis are not as effective as they should be, so long as the associated condition such as kala-azar remains untreated.

Associated conditions such as kala-azar should always be kept in mind when treating pulmonary tuberculosis especially when modern antibiotics and chemotherapeutic drugs fail to control the toxaemia and improve the general condition of the patient within reasonable time.

SUMMARY

A case of kala-azar with pulmonary tuberculosis is reported.

The management of such a case is discussed.

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PROFLAVINE SULPHATE POISONING

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Though the usage of acriflavine which is an amino-derivative of acridine (diaminomethylacridine chloride HCl) is not as extensive as it used to be before the advent of chemotherapeutic drugs and antibiotics, it still remains one of the most popular antiseptics that is used for irrigation of cavities and external application.

The following case of proflavine sulphate poisoning that occurred in an infant is reported in view of the rarity of such cases in the literature and the peculiar circumstances under which the poisoning occurred. It gives scope to discuss the possibilities of its therapeutic usage.

CASE REPORT

P.V.N., a male child of four months, was admitted to the children's wards of the King George Hospital, Visakhapatnam, on 25-4-54 with a complaint of vomiting and looseness of bowels since that morning. The history was that the child was administered castor oil into which was put an yellowish powder, probably a pinch or two in quantity, which was presumed to be turmeric powder, well known for its carminative properties. The powder was identified as proflavine sulphate which was brought by one of the inmates in the house from the hospital for application to the skin. The mixture was administered at 5 A.M. and immediately the child vomited an yellowish frothy material. Later in the day the child passed 4 loose motions and had also 4 yellowish vomitings. The child passed small quantities of urine twice before admission and it was deep yellow in colour.

At the time of admission the child was having a temperature of 100·0°F with a pulse rate of 150 per minute and a respiratory rate of 60 per minute. The whole body was flushed and the child was restless. The child did not pass urine after admission and urine was not, therefore, available for examination on that day. At the time of admission there were few crepitations at both the bases but the breath sounds were vesicular. The mucous membrane of the mouth and lips was intensely congested but there was no exfoliation or ulceration. Abdomen was distended ; liver was just palpable but not tender. The child was restless but there were no other neurological signs. There were no signs of dehydration.

Blood examination showed W.B.C. 7,500 per cmm. with polymorphs 60 per cent, lymphocytes 37 per cent and eosinophils 3 per cent.

Progress and treatment—The child was put on penicillin, vitamin C, (50 mg. t.d.s. by mouth), and rectal saline by drip and albumin water by mouth, and sedation with bromide and chloral hydras.

On the second day of admission (26-4-54) the body assumed a deep yellow tinge. There were two blebs on the soles of the feet about $2'' \times 1''$. The temperature was 99°F, pulse 124 and respiration 32 per minute. The child was restless. At about 2 P.M. the child passed urine which was deep yellow in colour and showed the presence of traces of albumin and bile pigments but no bile salts or organised deposits. At 8 P.M. the child developed slight oedema of face and eyelids. Sedation was increased and the same treatment was maintained.

On the third day of admission (27-4-54) the child was quieter under the influence of sedatives and the general condition continued to be the same. Temperature was 99°F, pulse 120 and respiration 32 per minute. The oedema of the face and eye lids increased considerably. The blebs also increased considerably in size and coalesced forming two extensive blebs over the two soles occupying them entirely (Fig. 1, *vide* Plate). The child was passing small quantities of urine, and some crystals

were found on the prepuce and the scrotal skin which were probably proflavine crystals. The liver was palpable ½" below the costal margin and was tender.

On the 4th day of admission (28-4-1954) the temperature was still 100·0°F with a pulse rate of 124 and respiration rate of 32 per minute. The yellowish colouration of the body showed a tendency to fade.

On the 5th day (29-4-1954) the patient's general condition improved considerably. The child passed one motion which was yellowish ; there was no vomiting. The yellowish discoloration of the skin and mucous membrane was receding and the oedema of the face considerably decreased. The blebs on the soles of the feet which were protected with sterile dressings gave way and were exuding a yellowish fluid. The temperature came down to normal and the enlargement of the liver appeared to increase and remained still tender.

On the 6th day (30-4-54) the child's condition was considerably better. The urine still showed albumin and bile pigments. The yellowish discoloration of the skin faded considerably and the blebs on the soles of the feet showed a tendency to heal.

On the 9th day (3-5-54) the urine still showed albumin and bile pigments. Blood count done on this day remained essentially the same as at the beginning.

By the 10th day (4-5-54) the child was playing well while the yellowish discoloration, oedema and the flushing had almost faded out. Blood chemistry and liver efficiency tests done on 4-5-1954 showed :

The serum van den Bergh was negative. Serum bilirubin was less than 1 mg. Thymol turbidity test, 12 units. Total serum proteins, 7·5 g. Urine : Urobilin—Nil.

The child was discharged on the 12th day of admission completely free from symptoms.

Discussion

This rare case offers several points for discussion in respect of the possibilities of acriflavine in therapy when administered by the oral or parenteral route and the varying degree of toxicity of its derivatives. It may be appreciated that the drug is undoubtedly absorbed by the gastro-intestinal tract but in view of the vomiting and diarrhoea which probably saved this infant, it is likely to prove a gastro-intestinal irritant if given in a fair concentration. It would look that the drug is excreted definitely by the skin and mucous membrane and by the kidneys and in that process it can irritate them and produce flushing and vesiculation of the skin probably also of membranes and dislocation of excretion of urine. The presence of crystals on the prepuce and scrotal skin shows that when in sufficient quantities it may result in blockage of nephrons. The drug is also probably excreted through the lungs as indicated by the signs in the lungs. The presence of bile pigments in the urine probably indicates that some derangement of function of the liver can occur but this is not confirmed by the liver function tests that were done rather late, on account of the seriousness of the child's condition.

It was unfortunate that the cerebrospinal fluid was not available for study as the lumbar puncture failed. It is, therefore, not known whether proflavine passes the blood brain barrier and finds its way into the tissues of the brain and the C. S. F. The restlessness that is evident may not indicate the irritation of the central nervous system by the drug during the course of the examination.

From the above observations it may be seen that the scope for the oral and parenteral use of proflavine in the therapy of certain skin conditions is probably worth while contemplating. It is also possible that it may penetrate the blood brain barrier and may prove useful in certain virus conditions both dermotrophic and neurotrophic to which we have no therapeutic answer either with chemotherapeutic drugs or antibiotics.

Acknowledgment

I am grateful to Dr. A. R. Govindarao, Professor of Pharmacology, Andhra Medical College, for his valuable criticism in preparing this communication.

XXIV MYSORE MEDICAL CONFERENCE

The 24th Mysore Medical Conference will be held at Shimoga on the 28th, 29th and 30th October, 1955. Doctors desirous of contributing papers to the scientific sessions, are requested to send (a) the title and (b) two typed copies of synopsis of the paper, so as to reach the State Secretary before the 1st September, 1955. The detailed programme of the conference will be announced later.

JOURNAL OF THE
INDIAN MEDICAL ASSOCIATION

CALCUTTA, JULY 16, 1955

THE NEED FOR DISCRETION IN THE USE OF PENICILLIN

After the most extensive use of penicillin during the last decade and over, it has become necessary to take stock of the limitations of the value of penicillin. Experimental and field observations gradually revealed these limitations one by one. The chief amongst these are :

(1) The bacteriostatic or bactericidal effect of penicillin is restricted to certain specified groups of organisms. Beyond these groups, penicillin seems to be hardly ever effective.

(2) Even these limited groups of organisms, which are usually susceptible to penicillin's action, can resist penicillin in different ways : (*a*) by elaboration of an enzyme called penicillinase, (*b*) by mutation of parent susceptible strains to penicillin resistant progeny ; and (*c*) by adaptation to the destructive defensive mechanism of the host which is lulled to inactivity during the administration of penicillin.

(3) The safety of penicillin is vitiated by development of hypersensitiveness to penicillin through its repeated parenteral administration. Varying severities of this sensitisation may develop, so that any reaction between minor allergic urticaria and severe anaphylactic shock may occur. The latter may be fatal.

The acquirement of drug resistance by susceptible organisms and the diminution of safety in the administration of penicillin have lately been matters of grave concern.

The development of resistance to penicillin in staphylococci, for instance, has been observed to be disquietingly on the increase. Evidence towards this effect has been produced from many countries including India. A recent editorial in this Journal[1] has attempted to draw attention of its readers to this problem of drug resistance.

And now comes several alarming reports of death due to anaphylactic shock following parenteral administration of penicillin in hypersensitives. Penicillin, like many other biological products, seems to be capable of developing hypersensitiveness through its repeated administrations. In allergic individuals, penicillin seems to be able to produce bad reactions. And, hence, it is no wonder that occasional cases of death, or of very severe anaphylactic reaction, produced by penicillin, percolates to the press. It is preferable for all of us to be alive to this potential danger before it overwhelms us.

No one route of administration of penicillin seems to be safe in so far as development of allergic reactions are concerned. External application, oral administration, aerosol spray, injections, —all are fraught with the possibility of producing mild to severe allergic reactions. Intraspinal administration of penicillin is perhaps the most dangerous in this respect.[2] An acute allergic meningomedullary oedema may develop in such cases.

An additional danger, which involves especially the oral administration of antibiotics, is the change of bacterial flora produced by the antibiotic. Those species which are susceptible to the antibiotic die out while the resistant ones then flourish uninhibited. Such a violent disruption of biological equilibrium may be followed by grave consequences. Cases which become fatal due to aureomycin-resistant staphylococcal enterocolitis following oral administration of aureomycin[3] are examples of this danger. Oral penicillin may likewise produce dangerous changes in the intestinal flora.

The modern highly purified crystalline preparations of penicillin cannot be called toxic in the proper sense of the term. It is not a protoplasmic poison, and its tolerated dose is very high compared with its small therapeutic dose. Hence, penicillin has a high therapeutic index. However, in spite of its freedom from toxicity in the general sense of the term it may produce grave consequences in at least *three* different ways, (1) development of hypersensitiveness, (2) change of equilibrium between the normal bacterial flora, and (3) production of drug-resistant strains of organisms.

Of course, these occasional and unfortunate consequences of penicillin therapy should not lead one into tabooing its use for good. It would, however, be wise for all of us to be conscious about its limitations, and restrict its use to desperate but suitable cases, where it can truly be life-saying.

Its scientific use should strictly speaking, be preceded by isolation and identification of the causative organism, and preferably also by a test on sensitivity of this causative organism, to penicillin. Futile administration of penicillin for treatment of such infections as are caused by penicillin-resistant strains may be construed as quackery, and may even be tantamount to homicide if the unfortunate patient dies of anaphylactic penicillin shock.

[1] Editorial—*J. Indian M. A.*, **23** : 351, 1954.

[2] Cheymol, J.—*Pharm. Jour.*, **174** : 74, 1955.

[3] Gardner, D. L.—*Lancet*, **2** : 1236, 1953.

CURRENT MEDICAL LITERATURE

Liver in Congestive Heart Failure

WHITE AND OTHERS (*Am. Heart J.*, **49** : 250, 1955) from the analysis of histological studies of the liver correlated with clinical and biochemical findings in 78 patients with congestive heart failure observe :

The patients were taken from routine hospital admissions. Each patient was on a regimen that included bed rest, sodium restriction, diuretics, and digitalis. Eighteen patients had relief of all clinical evidence of heart failure after treatment, 20 patients showed hepatomegaly despite disappearance of other evidence of congestive failure, and 37 patients had persistent fluid retention. Seventy-one patients had hepatomegaly, 37 had ascites, 16 had jaundice, 9 had splenomegaly, and 8 had hepatic pain. Serial biopsy studies demonstrated two mechanisms leading to liver fibrosis in heart failure : (1) passive congestion led to central necrosis and centrilobular fibrosis; (2) poor nutrition caused fatty liver and eventually diffuse fibrosis. Survival periods were related to the severity of hepatic changes in patients with fibrosis or necrosis and to the type of heart disease and the degree of heart failure in the others. Icterus, hypoalbuminaemia, and diffuse fibrosis were often accompanied by fluid retention refractory to therapy. The prognosis in these cases was poor. A study of the liver in congestive heart failure improves prognostic and therapeutic perspective. Use of a composite approach including clinical, biochemical, and histological study is desirable in patients with hepatomegaly or fluid accumulation resistant to treatment. The hepatic lesion is as important as the cardiac dysfunction in patients with diffuse fibrosis of the liver.

Rheumatic Heart Disease with Mitral Stenosis

HARVEY AND OTHERS (*Circulation*, **11** : 831, 1955) give in the following lines the summary of their observations on mechanical and myocardial facts in rheumatic heart disease with mitral stenosis :

Sixteen patients with rheumatic heart disease and pure mitral stenosis who were studied by the cardiac catheterization technic, were selected to demonstrate the relative importance of mitral block and myocardial insufficiency in this disease.

Analysis of the dynamics at rest and during exercise has permitted a division of these patients with mitral stenosis into two groups, one with mitral block characterised by pulmonary hypertension of varying degrees and a fixed or subnormal response in cardiac output on exercise, and the other in whom little or more pulmonary hypertension exists but in whom cardiac output does not increase normally on exercise. In the latter group myocardial insufficiency was felt to be the predominant lesion uncomplicated by any important element of mechanical block.

The importance of recognising the existence of a group of rheumatic patients with mitral stenosis and primarily myocardial insufficiency is emphasized since commissurotomy will not produce any improvement in function in such cases.

Norepinephrine and Epinephrine Content of Normal and Diseased Hearts

RAAB (*Circulation*, **11** : 893, 1955) gives in the following lines the summary of his observations on norepinephrine and epinephrine contents of normal and diseased hearts :

Colorimetric determination of total catecholamines, and bioassay of norepinephrine and epinephrine separately were carried out in 85 human hearts. Certain shortcomings of the available methods are discussed.

The findings confirmed the observation, made by other workers in other mammalian species, that the bulk of the pharmacodynamically active catechols in the heart consists of norepinephrine while epinephrine constitutes only a relatively small fraction.

A significant relative and absolute increase of epinephrine was found in the heart muscle of persons who had died after a fresh myocardial infarction, of those in congestive heart failure, and of patients with renal uraemia. The highest relative epinephrine concentrations were observed in cases with acute congestive failure and pulmonary oedema.

The comparatively frequent finding of augmented myocardial epinephrine in cases of such chronic conditions as essential hypertension, cardiac hypertrophy, myocardial degeneration and coronary sclerosis coincided, as a rule, with the presence of congestive failure of myocardial infarction.

In view of the highly oxygen-wasting, efficiency-impairing and potentially hypoxiating properties of epinephrine, it is assumed that its abnormal augmentation in the heart muscle constitutes an important pathogenic factor in congestive heart failure and in other forms of functional and degenerative heart disease, especially if vagal counter-regulation and/or coronary blood supply are inadequate.

The possible origin of the excess amounts of epinephrine found in diseased hearts is discussed. In uraemia, excess quantities seem to accumulate as a sequel to renal catechol retention.

The high norepinephrine concentrations present in the hearts of more or less healthy persons, who had died suddenly and unexpectedly from vascular or traumatic accidents, are believed to represent a normal rather than a pathological feature, in contrast to a norepinephrine depletion of the heart in various types of prolonged, fatal illnesses.

Diagnosis of Tricuspid Insufficiency

SEPULVEDA AND LUKAS (*Circulation*, **11** : 882, 1955) write :

Of 146 patients with rheumatic heart disease and predominant mitral valve involvement studied by cardiac catheterization, 60 were found to have a right atrial pressure curve characteristic of tricuspid insufficiency. The clinical diagnosis had previously been made in only 23·3 per cent of the cases. All the patients who had cardiac failure were under optimum medical control at the time of the study.

The most constant clinical features were auricular fibrillation, persistent liver enlargement, a history of

right-sided failure and roentgenographic evidence of moderate to severe enlargement of the right atrium. A small QRS complex, frequently of the rsR pattern, in lead V_1 of the electrocardiogram was found in 60·4 per cent of the cases.

The pulmonary vascular resistance, right atrial mean and right ventricular pressures were distinctly greater as compared with the values in a group of patients with auricular fibrillation, a similar degree of mitral involvement but no tricuspid insufficiency.

The classical clinical features of tricuspid insufficiency were present relatively infrequently and were seen more often in patients with right atrial mean pressures greater than 10 mm. Hg.

Tricuspid insufficiency, functional or organic, is a frequent complicating lesion in mitral valvular disease and its presence should be suspected in any case with auricular fibrillation, persistent liver enlargement and definite increase in size of the right atrium.

Blood Pressure and Diet

LOWENSTEIN (*Am. Heart J.*, **49**: 563, 1955) gives in the following lines the summary of his observations on the study of blood pressure in relation to diet in Chinese and Caucasian students in New York City:

A comparative study of 282 Chinese and Caucasian students, from 20 to 45 years of age, of both sexes, in New York City is described. These 282 students were divided into four study groups with diet as the main variable in the three Chinese groups.

In general, the main differences were found between the three Chinese groups on the one hand and the Caucasian group on the other. Measurements of height, weight, and chest circumference showed significant differences between the two racial groups in both sexes. Historic data on the per cent of cardiovascular-renal diseases in their parents provided evidence for a significantly higher per cent in the Caucasian males. A rough measure of vasomotor instability showed a significantly higher per cent among the Caucasian males and females than in the Chinese.

No correlation was found between height and weight and the lowest blood pressure values.

The following conclusions may be drawn:

1. Mean blood pressure levels in Chinese male students were significantly lower than in Caucasian male students of similar age and socioeconomic status.

2. There were no significant differences in the mean blood pressures of the females in the same groups.

3. Differences in diet did not appear to be of significance in determining differences in mean blood pressures found between the Chinese and Caucasian male students. Before the influence of diet on blood pressure can be considered as insignificant or negligible in the study groups under review, however, a much longer follow-up would be needed over a period of ten years or more. This is, unfortunately, hardly possible from a practical point of view.

4. Among the constitutional factors examined, differences in height, weight, and chest circumference did not account for the differences in mean blood pressure between the Chinese and Caucasian male students.

5. Significant differences were found in vasomotor instability and the amount of positive family histories of cardiovascular-renal diseases between the two racial groups. To what extent these differences determined the differences in mean blood pressure found between the Chinese and Caucasian male students remained unanswered.

6. Femaleness, a constitutional factor of undiscovered origin, as yet, may play a significant role in determining the lower blood pressures of the Chinese males.

7. Further research is indicated along these lines which should attempt to investigate the endocrine aspects of femaleness with quantitative studies of the various hormones.

Diuretic Action of Rauwolfia Serpentina

DROVANTI AND OTHERS (*Minerva med.*, **45**: 1403, 1954, Ref. *J.A.M.A.*, **157**: 1060, 1955) write:

The effect of Rauwolfia serpentina on the renal function was studied in dogs that were given intravenously a total dose of from 4 to 20 mg. of total alkaloids of the drug in distilled water. Diuresis increased in all the animals, and this increase is ascribed partly to hyperfunction of the glomeruli and partly to hypofunction of the tubules. There was, in fact, in the animals a 40 per cent increase of the glomerular filtration and a 2·13 per cent reduction of the tubular reabsorption. The authors attribute this to a decreased tone of the afferent arteriole, while that of the efferent arteriole was unchanged. In addition to this particular tone of the afferent arteriole, there were also special new conditions of the water-sodium chloride balance. The plasma and blood flow to the kidneys was increased by 8 and 10 per cent respectively. The blood sodium levels tended to decrease, whereas those of potassium tended to increase. This inverse ratio of sodium to potassium was correlated more with the increase of the latter than with the decrease of the former. The increased blood potassium values were due not to a retention of the electrolyte—its excretion in the urine was increased—but rather to its passage from the intracellular to the extracellular area. The picture of renal excretion of the electrolytes was comparable to that seen in cases of increased vagotonia and arterial hypotonia. The nitrogen content of the blood was decreased whereas its urinary excretion was increased. This was the result of the increased filtration. The quantity of nitrogen eliminated through the urine was directly proportional to the quantity of urine: its urinary concentration did not undergo particular increases because of the homogeneous diffusibility of the substance in the organic fluids. According to the authors, the particular behaviour of the arterioles suggests that the renal function had adapted itself to the new state of water balance and that it had done this by eliminating the excess of water or salts so as to bring about a new state of homeostasis in connection with the new conditions included by the introduction of total alkaloids of Rauwolfia serpentina.

CURRENT TOPIC

THE CARE AND TRAINING OF AUTHORS

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James Thurber has drawn a number of cartoons centred in the theme of the permanent warfare between men and women. I might, for my purpose, have paraphrased this theme and entitled my article, "The permanent warfare between author and editor." I have myself been alternately on both sides in this battle, which I suppose classifies me as a mugwump. A mugwump has been defined as a bird that sits on a fence, with its mug on one side and its wump on the other.

I became assistant editor of a high school paper in Uniontown, Pa., in 1915, and have been serving almost continuously in some kind of editorial capacity ever since. I have also been an author for a slightly longer period, and have published a modest number of scientific and popular articles in my own and other people's journals. On the whole I should say that it is most satisfactory to an author to publish in a journal of which he is himself the editor. This not only insures appreciative acceptance and early publication, but affords a reasonable guarantee that one's manuscripts, when returned with galley proof, will not be annotated with snide remarks on spelling and punctuation, or have the best phrases deleted with a blue pencil.

I lately discussed the substance of these remarks with a graduate of a school of journalism, who expressed surprise and commented, "In journalism school we were taught to treat editors with great respect." If this be the case generally, I wish all scientific authors might take a course in journalism, for I know of nowhere else that such worthy ideals are inculcated. Most graduate students learn from their professors that editors are a necessary evil, to be borne with or if possible circumvented.

The essence of the matter is that editors are tough and that authors are touchy. Each of these attitudes is completely understandable.

An author puts his best efforts into a paper. It represents months or years of painstaking research, long hours of work in the library, and finally the throes of literary composition. He knows, or at least fondly imagines he knows, how to read, write, and spell. When he has finished his manuscript, he is proud of it. Naturally he thinks it is good, or he would not have taken the trouble to write it.

So he sends it off to a scientific journal. In due course, after having been read by one or more referees, it comes back with a few suggestions from the editor. The title should be changed, say from "Absence of extraneous elements in the flora of Turtle Mountain" to "Prevalence of indigenous elements in a selected Nearctic alpine flora." The introduction should be shortened to one paragraph, the review of literature omitted, the discussion limited to 500 words, reference made to Smith's 1951 bibliography and no literature cited except papers subsequent to that date, and a short summary written for *Biological Abstracts*.

The editor is of course merely trying to be helpful, but the gratitude of the author seldom finds expression in paeans of appreciation. The situation can be epitomised in the story of the two Boy Scouts who arrived late at their scout meeting, breathless and dishevelled, just in time to answer the question, "Did you do your good deed today?"

"Yes," they replied, "we helped an old lady across the street."

The scoutmaster was inclined to regard this as a rather modest good deed, especially when it had to be bisected between the doers. "Why," he inquired, "did it take two of you to help one old lady across the street?"

With one accord they replied, "She didn't want to go."

The reluctance of authors to co-operate with editors who are trying to do good deeds on their behalf is little short of phenomenal. I once received two manuscripts from an author in the same mail. One I accepted and the other I returned with the suggestion that it could be more suitably published elsewhere. The author replied with considerable heat, "If you won't publish this one, send the other one back too." On another occasion I returned a manuscript with the unusual suggestion, not that it be abridged but that it be amplified to include additional material. I received no reply and did not pursue the matter further. Quite a long time afterwards I wrote this author for some information that I personally needed in his special field. He replied, "If I give you this information—will you publish the paper I sent you five years ago?"

I have said that editors are tough, and they need to be so, because it is their business to maintain standards and to prevent the immense and increasingly complex business of scientific publication from falling beneath "the reign of Chaos and old Night." It is my present purpose to inquire just how tough they ought to be and how they can make it stick—in other words (incidentally, when I am editing other people's copy, I always cross out the phrase in other words and everything that follows), what are the editor's prerogatives, by what sanctions can they be enforced, and conversely, where is the line to be drawn that will prevent the editor from becoming completely authoritarian? After all, authors have certain rights, however minor and inconsequential they may be.

The first thing to be said is that the editor must know his business. Speaking now in my capacity as an author, I will say that only once in my life have I won an argument with an editor. That was over the use of a possessive pronoun with a verbal noun, in such an expression as "I look forward to his coming." I won my stating with great finality, "The gerund always takes a possessive." He subsided because he had never heard of a gerund and wanted time out to look it up and see whether such a thing really existed or whether I had invented it on the spur of the moment.

Actually if he had been an editor worth his salt, he would have replied without turning a hair, "It may be

true in general that the gerund takes a possessive, but it is not true in the case of this magazine."

Seriously, an editor has to have an immense and ready knowledge of grammar, spelling, punctuation, capitalization, permissible variant spellings, foreign words and phrases, the International Rules of Zoological and of Botanical Nomenclature and wherein they differ, and the special vocabularies of a dozen different sciences. He must know why it is often correct to capitalize the specific names of plants, but never the specific names of animals. He must know that new species of animals can be described in any language from English to Sanskrit, but that new plants must be described in Latin, and he should be able to read and edit the Latin description (we shall not insist that he be able to read and edit Sanskrit, although that would help). He should know that the direction that may briefly if inelegantly be described as from back to belly is dorsoventral in zoology and dorsiventral in botany; also that dorsi- is correct in certain anatomical terms, as dorsispinal. He must also keep abreast of the times, and be aware that language is a living thing and that correct usage changes from generation to generation. There is no use in trying to convince an author of the error of his ways by citing the 1910 edition of the *Century Dictionary*, or the battered copy of Woolley's *Handbook of English Composition* the editor used in college. Recent editions of Woolley even cite cases in which the gerund does *not* take the possessive.

Most important of all, the editor must have a nose for mistakes, whether of expression or of fact, which corresponds to a good reporter's nose for news. His mechanism for spotting errors or possible errors must be as sensitive as a Geiger counter.

Now that I have described in glowing detail this superman, let us consider just how far he is entitled to go in exercising his extraordinary talents. The general procedure is something like this:

If the editor has any major changes to suggest, he returns the manuscript to the author, offering his suggestions for revision. These suggestions the author may accept or reject, although it must be acknowledged that he is under a fair amount of pressure to make the changes if he wants to get his paper published. His alternative, of course, is to withdraw the paper and submit it elsewhere. If the changes are of a minor nature, the editor will probably make them on his own responsibility, and the author first discovers them when he gets the galley proof. He is quite likely in a moment of pique to change everything back to the way he wrote it in the first place. He returns the proof to the editor, who erases the author's changes, and sends the galleys to be paged up. In due course the author receives a page proof, and by this time being madded than a wet hen, he reverses all the editorial changes, and does it in ink. However, the corrections in ink do not have the finality he thinks, because the editor has kept a duplicate page proof, which is the one he will, after due deliberation, send to the printer.

It is this final page proof that involves the editor in deep searching of soul. How far shall he compromise with the author, and how far shall he insist on the alterations which he thinks are desirable for the improvement of the paper or necessary for the maintenance of standards of scientific publication? I do not know the answer to this problem; I can only tell you the formula I have arrived at and how I reached it.

When I was a young editor, slightly past the high school phase but still not quite dry behind the ears, I was a great stickler for consistency. Every paper had to be set up in the same way; citations of literature had to be made in parentheses, by author, year, and page, referring to a terminal bibliography, which also had to be set up in a standard manner.

I was unhappily but usefully shaken out of this fool's paradise by a two-year stint in China as editor of the *Lingnan Science Journal*. In those two years I got out 2000 pages of scientific publications, written in French, German, and English and interlarded with Chinese. My principal German contributor corrected his proofs in German script, which is one of the best ways I know to get even with an editor. My Chinese compositor did not read English, but set type by picking out of the font the letters that looked like the copy that was given him; actually he did phenomenally well, but inevitably he mixed up letters like lower-case *b* and *d*; and for first time I learned the literal meaning of minding one's *p*'s and *q*'s.

After two years of this I found that I had not entirely lost my editorial ideals, but I had modified them. The immovable object had yielded to the irresistible force. I arrived at the conclusion that consistency is an unattainable ideal. I do not mean that it should not be striven for; I mean only that it cannot be attained.

I still like the method of citation of literature I have described, a method that I learned at the University of California more than 30 years ago. I still follow it in my own publications. I follow it as far as possible in my editorial work. But when I was editor of the University of Washington *Publications in Biology*, an entomologist turned in a paper that did not conform to this formula. I called this to his attention and suggested that he be guided by precedent. This was the wrong thing to say, because he immediately produced innumerable examples to prove that entomologist cite their literature immediately at the beginning of each discussion of a species, and that they may or may not include a terminal bibliography.

I was convinced, and agreed that the entomologists could follow their professional idiosyncrasies. This practice was allowed and we follow it also in the *Proceedings* of the California Academy of Sciences. I think any journal that publishes papers in more than one field has to allow this kind of latitude, however deeply it may grieve the editorial spirit.

In matters which, in the final proof, still remain moot between editor and author, I proceed as follows: I correct positive and probable errors. I will not permit words to be hyphenated in the wrong place, or a singular noun to be followed by a plural verb, or a plural noun like data to be used with a singular verb. I still hold out for the correct cases for pronouns, although I am weakening, and may in another 10 years yield to such an expression as "It was him." But I

have given up worrying about *shall* and *will*, split infinitives, and terminal prepositions. I make my suggestions, and the author can take them or leave them. After all, it is his grammar and not mine that the reader will judge, if indeed the reader pays any attention.

To those editors who feel that I am abandoning the real line of defence and retiring to an inner citadel that must ultimately fall, I shall offer this suggestion: a great deal of the difficulty between author and editor could be resolved, and the work of each made easier, if the editor would tell the author what he wants.

Shifting gears now from the third to the second person—if you are going to maintain specific standards, tell the author what your standards are. State under your masthead that manuscripts must be type-written, double-spaced, on one side of the page, and should conform to the University of Chicago *Manual of Style* or some other—your own, if you care to write one. As a matter of fact, most things that most editors insist on can be spelled out on one mimeographed page, which can be supplied to a prospective author on request, or sent to him with the return of an unsatisfactory manuscript, with the suggestion that he comply. This avoids a great deal of argument, debate and needless correspondence, and puts the editor in a position that can be defended by logic instead of *force majeure*.

In conclusion, I should like to return to the terminal preposition. What should be the last word on this has been said by Winston Churchill. When an editor recast a sentence of his that ended with a preposition, Churchill changed it back to the original form and wrote in the margin, "This is the kind of nonsense up with which I will not put."

Most of the problems that arise between editor and author can be alleviated by a sense of humour and resolved to their mutual satisfaction by the use of plain common sense.—*Science*, Vol. 121, No. 3146, 15 April, 1955.

NOTES AND NEWS

All-India Institute of Mental Health

Selection for the next batch of post-graduates to undergo two years' course of training for the Diploma in Psychological Medicine, All-India Institute of Mental Health, Bangalore, would be made in August. The course starts in January 1956. The total number of students to be admitted would be twelve. Those that are selected by the Committee appointed by the Government of India would get a stipend of not less than Rs. 150/- per month.

Those who are interested might apply to the Director-General of Health Services, New Delhi. Those in service should apply through proper channels.

Canada's Gift of Medical Mobile Vans to India

Three medical mobile vans have been presented for service in rural areas by the Unitarian Service Committee of Canada to the All-India Women's Conference.

The gift has been made by Dr. Lotta Hitschmanova, Executive Director of the Committee, in Delhi. She is on a world survey tour, to inspect welfare work being done by her organization in various countries. From Delhi she will go to Korea where the Committee has a project of nutrition to the war-affected children.

Tata Awards for Medical Research

The trustees of the Lady Tata Memorial Trust have announced the following scholarships and grants for 1955-56:

The international awards totalling 6,675 for research in diseases of the blood with special reference to leucaemias are made to Dr. J. K. Kieler, Dr. J. Ringsted, Dr. J. Rygaard, Dr. N. A. Stenderup, Dr. F. Kissmeyer-Nielsen (all of Denmark), Dr. J. Nordmann and Dr. M. Seligmann (France), Prof. H. Teir and Dr. C. G. V. Wasastjerna (Finland), Mr. S. Joseph and Dr. Alice Steward (England) and Dr. A. Sreenivasan (Bombay).

Indian scholarships of Rs. 250 per month each for one year for scientific investigations having a bearing on the alleviation of human suffering from disease are awarded to Mr. N. A. Nityananda Rao (Bangalore), Mr. T. K. Sundaram (Madras), Dr. Prem Nath Satsangi and Dr. Satish Chandra (Lucknow), Dr. Mahendra Kumar Trambaklal Mehta (Patna) and Dr. Gangadharvyankatesh Bhide and Mr. U. W. Kenkare.

Commonwealth Medical Conference

The fourth Commonwealth Medical Conference opened on 14-5-55 in Toronto and for the first time in half a century, brought together the medical experts of ten nations.

The President-elect, Dr. T. Clarence Routley, of Toronto, said the medical profession, possessing so many common denominations, "is especially called upon to play a vital part in cementing the Commonwealth."

About 3,000 delegates from India, Pakistan, Ceylon, Australia, Ireland, New Zealand, South Africa, Southern Rhodesia and the U.K. as well as Canada attended the conference. Dr. A. P. Mittra, Hony. General Secretary of the Indian Medical Association represented the Association at the conference.

Indian Doctors for Post-Graduate Training Abroad

A group of 40 medical practitioners from all over India left Bombay for London on Wednesday by an Air-India International plane *en route* to the United States for a year's work in American and Canadian hospitals.

This is the third team of Indian medical men to visit America and Canada under a project sponsored by the Indian Medical Association in co-operation with the American Medical Association.

34 doctors of the group, which includes seven lady doctors, will work in various American hospitals while five will be attached to the medical institutions in Canada.

The last year's group consisting of 33 doctors, has just completed a year's assignment.

The present group includes: Dr. M. M. Mirani, Dr. N. S. Sheshgiri, Dr. B. M. Nanavaty, Dr. S. J. Modi, Dr. Noel F. O. De Netto, Dr. R. V. Kotnis, Dr. (Miss) D. R. Keswani, Dr. (Miss) Leela K. Bhavnani, Dr. V. A. Chandavarkar, and Dr. (Miss) V. P. Bhoopatkar from Bombay State; Dr. Madan Mohan Lal Arora, Dr. Harbhajan Singh Sodhi, Dr. Rajendra Lal Sethi, Dr. Ranjit Gupta, Dr. (Miss) Indira Krupanidhi, Dr. Prem Sarup Sikand, Dr. (Miss) Pushpa Jolly and Dr. Harbhajan Singh of Delhi; and Dr. J. Dutta Choudhury, Dr. Harinath Pal, Dr. B. K. Chowdhury, Dr. Sisir Kumar Sen and Dr. A. K. Ghosh from Calcutta; Dr. K. P. Sinha, Dr. N. P. Sinha, Dr. Tulsi Bhagat Giri, Dr. Manzoor Alam Ansari and Dr. H. N. Verma from Bihar; Dr. V. J. Trivedi and Dr. (Miss) M. Vatsala from Saurashtra; Dr. Santokh Singh and Dr. R. S. Rana from the Punjab; Dr. Kewal Krishen Laroia and Dr. P. N. Banerji from Uttar Pradesh; Dr. Vali Nazeer Ahmed, Dr. K. Srinivasan, Dr. (Miss) B. K. Saroja Bai, and Dr. P. S. Subba Rao from Bangalore; Dr. A. K. Nerurkar from Nagpur and Dr. G. L. Reddy from Kurnool.

Increase in Rate of Mortality from Lung Cancer in U.K.

A World Health Organization survey shows that Britain is among the countries where a serious increase in deaths from cancer of the lungs has been noted in recent years.

The survey, carried out in 16 countries in Europe, America and Oceania, shows a steady rise in lung cancer deaths from 1949 to 1952, particularly among men, who are affected five or six times more than women.

Dr. M. Pascua, of Spain, the Organization's Director-Consultant who carried out the survey, refers to the publicity given to the possible relationship between lung cancer and cigarette-smoking and lists some of the factors which may have affected the continuous rise in deaths from lung cancer. They are:

1. An increase in the 40-80 age group in which cancer is most prevalent. 2. The drop in mortality from tuberculosis of the lungs, which may have made recognition of cancer case easier. 3. Improvement in diagnostic techniques. It is impossible to say to what extent the increase in mortality figures may be due to this factor, which cannot account for the difference in the figures for men and for women.

Dr. B. S. Shroff Memorial Gold Medal

The following subject has been selected by the Bombay Medical Union for competitive thesis for the above Prize for 1955.

"Health of School Children and recommendations to improve their health based on original collected observations."

The award will be in the form of a Gold Medal called the Dr. B. S. Shroff Memorial Gold Medal of the Bombay Medical Union.

The competitor must be (*i*) a duly qualified member of the medical profession holding a degree or degrees and diplomas from Indian and other universities created by statute, or (*ii*) a duly qualified member of the medical profession holding Diplomas of the College of Physicians and Surgeons of Bombay. The thesis must be sent in three clear typed copies so as to reach the Honorary Secretaries, Bombay Medical Union, Blavatsky Lodge Building, French Bridge, Chowpatty, Bombay 7, by the 30th September 1955. The thesis should be designated by a motto instead of the writer's name and should be accompanied by a sealed cover containing the name of the writer and his post-office address. The name of the Prize, the year of the competition, the subject of the thesis, and the writer's motto should be superscribed on the cover.

No study or essay that has been published in the medical press or elsewhere will be considered eligible for the prize, and no contribution, offered in one year will be accepted in any subsequent year unless it includes evidence of further work. The accepted thesis shall be the property of the Bombay Medical Union.

Bombay Medical Council Election Results

The following persons have been elected members of the Bombay Medical Council in accordance with the provisions of clauses (b) and (c) of sub-section (2) of Section 2 of the Bombay Medical Act 1912 (Bom. VI of 1912).

Elected under Section 2 (2) (b) of the Act:

1. Dr. R. V. Sathe, M.D., M.R.C.P., the President-elect of the Bombay Territorial Branch, I.M.A. and a member of the Medical Council of India.
2. Dr. Chunibhai S. Patel, M.B.B.S., L.R.C.P., F.R.C.S. (LOND.), President of the Bombay Territorial Branch I.M.A. and President of Medical Council of India.
3. Dr. Bhaskar R. Patel, M.D., M.R.C.P., T.D.D.

Elected under Section 2 (2) (c) of the Act:

1. Dr. Madhukar Ganesh Bhide, L.C.P.S. (BOM.), D.O.M.S. (BOM.).
2. Dr. Ganesh Vishwanath Joshi, M.B.B.S. (BOM.), M.S. (BOM.), President of the Hubli Branch I.M.A. and a member of the Working Committee I.M.A.
3. Dr. Motibhai Desaibhai Patel, M.B.B.S. (BOM.), L.R.C.P. (LOND.), a member of the G. S. Provincial Branch I.M.A.
4. Dr. Shripad Shivrao Ugrankar, M.B.B.S. (BOM.), M.R.C.P. (LOND.), Secretary of the Bombay Territorial Branch I.M.A. and Bombay Branch I.M.A.
5. Dr. Pranlal Ranchhodlal Trivedi, L.C.P.S. (BOM.), President of the G. & S. Provincial Branch I.M.A.
6. Dr. Shantilal Chhaganlal Sheth, M.B.B.S. (BOM.), Vice-President of the Bombay Branch of I.M.A.

International Congress Against Alcoholism

At the kind invitation of the Governor-Mayor of Istanbul, Professor Dr. F. K. Gokay, the 25th International Congress against Alcoholism will be held in Istanbul, Turkey, from 10th-15th September 1956.

As has been the case in previous congresses the programme will cover the problem of alcoholism in its various aspects, medical, economic, educational, etc. It is hoped, it will be possible, as formerly, to present the latest researches in these fields. Special attention will be given to the treatment and rehabilitation of

alcoholics. to the question of alcohol and road safety and to the use of non-alcoholic beverages.

As in past congresses, opportunity will be given to the various organisations combating alcoholism to arrange special meetings and the Congress will provide an opportunity for a sharing of experience by those who in different parts of the world are concerned with the alcohol problem.

Further information may be had from the International Bureau against Alcoholism, Case Cure 49, Lausanne, Switzerland.

World Congress of Doctors for the Study of Present-Day Living Conditions

Prominent medical personalities from different parts of the world accepted an invitation to attend a scientific Conference on the Medical Effects of A and H Bomb Explosions, opened in Tokyo on May 30th, under the presidency of Professor Rm. Masao Tsuzuki, Director-General of the Central Red Cross Hospital of Japan.

The scientists were invited by Professor Tsuzuki and Dr. Hideo Kumabe, Director of the Tuberculosis Research Institute of Tokyo, and president of the Japanese Doctors Association against the A and H Bomb. Their journey was carried through with the assistance of the World Congress of Doctors for the study of Present-Day Living Conditions. The programme was for 14 days to examine cases and evidence on atomic diseases.

CORRESPONDENCE

The Editor is not responsible for the views expressed by correspondents

Peptic Ulcer—Diagnosis and Management

SIR,—I have read with interest the article 'Peptic Ulcer—Diagnosis and Management' by Dr. H. Ganguli, M.D., in the April 1, 1955 issue of the Journal of the Indian Medical Association.

The writer says "The danger of administration of systemic alkalisers as neutralising agents in the treatment of peptic ulcer lies in the induction of alkalosis". I think that non-use of systemic alkalisers in the peptic ulcer is generally due to short staying action of these alkalisers and due to production of reflux or rebound acidity by these systemic alkalisers. I am etc.

SUSHIL KUMAR SAMANTA,
Health Officer,
Purnea *Purnea Municipality.*

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SIR,—I thank Dr. S. K. Samanta, Health Officer, Purnea Municipality for his observations on "non-use of systemic alkalisers in the peptic ulcer". The two factors viz., short-staying action, production of reflux or rebound acidity are the drawbacks but not dangerous drawbacks. The real danger which arises from the use of systemic alkalosis e.g. sodi bicarb arises in the following way:

In vivo the action of sodi bicarb with HCl is: $NaHCO_3+HCl \rightarrow NaCl+H_2CO_3$ (H_2O-CO_2). NaCl is readily absorbed and Cl^- comes from the blood and returns to the blood in equivalent amounts; the Na^+ coming from the outside and adding to the base or alkali of the body must be excreted primarily in the urine. Some of the CO_2 is eructated; some is absorbed in the blood or expired.

All the sodium in $NaHCO_3$ contributes towards alkalosis. For this reason it should better be avoided as the sole source of antacid in the management of peptic ulcer. I am etc.

H. GANGULI.

Dr. Samanta's contention is correct so far as casual treatment of acidity or heartburn is concerned. But for the treatment of established cases of peptic ulcer where alkali is used after every feed, systemic alkalisers are avoided so as not to produce alkalosis. That is why adsorbents are far more useful and popular at present.

—ED., *J. Indian M. A.*

Intramuscular Irgapyrin

SIR,—With reference to the correspondence "Intramuscular Irgapyrin" in your issue of May 1, 1955, on page 609 regarding three cases of abscess with extensive necrosis and three cases of induration threatening abscess formation in a series of 200 injections of "Intramuscular Irgapyrin", I wish to observe as follows:

These abscesses are not due to want of aseptic care on the part of the practitioner. Intramuscular injections must be intramuscular meaning that the material is deposited in the muscle substance; by virtue of its vascularity, the drug is absorbed completely with the desired effect on the patient. If the drug is deposited in the subcutaneous fat of which gluteal region contains the maximum amount for the area, and which is very deficient in vascularity, the drug is not absorbed, acts as an irritant and produces tissue necrosis and liquefaction of fat. This in reality is the cause of abscess. To prevent this catastrophe, the injection is made into the muscle using a suitable length of needle. The third case "that of a labourer without any fat in the gluteal region" is to be explained by the low vitality and low vascularity in his muscle resulting in non-absorption.

This leads on to a very important point in the treatment of such abscesses. I have evacuated these abscesses by a fairly long incision and have scrupulously avoided plugging the cavity for drainage. Surface dressing and packing are done and in about two or three days the discharge is almost nil when the edges of the wound are brought together by Leucoplast strapping. Should there be oozing of blood from the cavity at the time of evacuation, plugging is necessary but this is discarded the next day. I am etc.

Bangalore. T. SESHACHALAM.

SUPPLEMENT

Journal of the Indian Medical Association

Vol. 25, No. 4 CALCUTTA July 16, 1955

ASSOCIATION NOTES

I. M. A. WORKING COMMITTEE

Proceedings of the 54th Meeting of the Working Committee of the Indian Medical Association held at Calcutta on 23rd and 24th April, 1955.
(Subject to confirmation)

Members Present :

(a) *Ex-Officio Members* :

1. Dr. S. C. Sen (New Delhi)—President (In the chair). 2. Dr. B. V. Mulay (Sholapur)—Immediate Past President. 3. Dr. B. K. Vinchure (Nagpur)—Vice-President. 4. Dr. A. P. Mittra (New Delhi)—Honorary General Secretary. 5. Dr. A. N. Roy (Calcutta)—Honorary Joint Secretary. 6. Dr. P. K. Guha (Calcutta)—Editor, Journal, I.M.A. 7. Dr. R. Sinha (Calcutta)—Honorary Secretary, Journal, I.M.A.

(b) *Representatives from State/Territorial Branches* :

8. Dr. M. V. Krishna Rao (Visakhapatnam) Andhra State Branch. 9. Dr. S. P. Nath (Silchar) Assam State Branch. 10. Dr. A. C. Ukil (Calcutta), 11. Dr. A. K. Bose (Calcutta), 12. Dr. Sukomal Sen (Calcutta), 13. Dr. I. Mojumdar (Calcutta) Bengal State Branch. 14. Dr. C. S. Thakar (Bombay), 15. Dr. P. D. Daftary (Bombay) Bombay Territorial Branch. 16. Dr. S. M. Ghosal (Patna), 17. Dr. A. K. Sen (Patna) Bihar State Branch. 18. Dr. (Capt.) R. C. Goulatia (Delhi), 19. Dr. P. C. Bhatia (Delhi) Delhi State Branch. 20. Dr. H. J. Trivedi (Bhavnagar), 21. Dr. K. H. Haradhavala (Surat) Gujrat and Saurashtra Territorial Branch. 22. Dr. Syed Ali (Hyderabad), 23. Dr. P. L. Narayen Rao (Hyderabad) Hyderabad State Branch. 24. Dr. K. B. Bhiwapurkar (Nagpur) Madhya Pradesh State Branch. 25. Dr. R. A. Bhagwat (Indore) Madhya Bharat State Branch. 26. Dr. V. P. Vasudevan (Coimbatore), 27. Dr. R. Sankaran (Madras) Madras State Branch. 28. Dr. H. V. Upadhye (Dharwar), 29. Dr. B. K. Modak (Kalyan) Maharashtra and Karnatak Territorial Branch. 30. Dr. M. Gurudas (Bangalore), 31. Dr. T. A. Doraiswamy Royan (Chintamani) Mysore State Branch. 32. Dr. (Capt.) H. N. Shivapuri (Kanpur), 33. Dr. B. S. Mehta (Banaras), 34. Dr. S. N. Mukherji (Banaras) U. P. State Branch.

(c) *Co-opted members* :

35. Dr. Ved Prakash (New Delhi). 36. Dr. R. A. Amesur (Bombay). 37. Dr. Sain Das Vohra (Amritsar). 38. Dr. (Capt.) P. B. Mukherji (Calcutta). 39. Dr. D. V. Venkappa (Madras).

(d) *Invited members* :

40. Dr. Nihar Kumar Munshi—President, Calcutta Branch. 41. Dr. S. K. Dutt—Honorary Secretary, Calcutta Branch. 42. Dr. R. C. Sen (Calcutta). 43. Dr. J. N. Maitra (South Calcutta), Hony. Secretary, S. Calcutta Branch. 44. Dr. Mohini Kanta Majumdar (Jadabpur, Calcutta), Hony. Secy. Jadabpur Branch. 45. Dr. B. B. Das (Howrah), Hony. Secretary, Howrah Branch. 46. Dr. N. L. Ghosh (Howrah). 47. Dr. N. C. Sanyal (Baranagore), Hony. Secretary, Baranagore Branch. 48. Dr. Abodh Sinha (Bongaon), Hony. Secretary, Bongaon Branch.

1. *Condolence Resolution* :

(*i*) The following condolence resolution was unanimously passed, all members standing and observing silence for one minute :

"This meeting of the Working Committee of the Indian Medical Association places on record its deep sense of sorrow at the sad demise of the following members of the Association and conveys its heartfelt sympathy to the members of the bereaved families :—

(1) Dr. S. B. Imam (Gaya), (2) Dr. B. Chokkanna (Bangalore), (3) Dr. R. P. Shah (Vapi), (4) Dr. K. V. Chipkar (Belgaum), (5) Dr. Bijay Chandra Gupta (Chapra), (6) Dr. M. Somasundaram (Kurduwadi), (7) Dr. Banshi Dhar Goswami (Mangaldoi), (8) Dr. C. V. Jacab (Trichur), (9) Dr. Parmashwari Dass (Delhi), (10) Dr. Umrao Singh (Delhi), (11) Dr. J. K. Sen (Delhi), (12) Dr. V. K. Girijavallabha Menon (Trivandrum), (13) Dr. R. M. Fozdar (Ahmedabad), (14) Dr. B. Sahai (Gwalior), (15) Dr. P. M. Kamath (Coimbatore), (16) Dr. K. D. Bhalarao (Raipur), (17) Dr. Shyam Swaroop Satyavarta (Bareilly), (18) Dr. Subrata Mukherjee (Kandi), (19) Dr. M. N. Choudhury (Biratnagar), (20) Dr. V. V. Kane (Pandharpur), (21) Dr. C. H. P. Allen (Coonoor), (22) Dr. M. V. Sundrasan (Trichy); (23) Dr. S. P. Chatterjee (Calcutta).

(*ii*) The Working Committee passed a resolution of condolence at the death of the following world-renowned scientists :—1. Sir Alexander Fleming. 2. Prof. Albert Einstein. 3. Dr. S. S. Bhatnagar.

2. *Messages of inability to attend the meeting* :

Messages of inability to attend the meeting received from the following members were read :

1. Dr. M. M. S. Siddhu (Lucknow). 2. Dr. A. P. Shukla (Ahmedabad). 3. Dr. H. R. Dawar (Delhi). 4. Dr. S. N. Mitter (New Delhi). 5. Dr. J. N. Bahadur (New Delhi). 6. Dr. U. Krishna Rao (Madras). 7. Dr. L. R. Deshpande (Hyderabad). 8. Dr. G. S. Melkote (Hyderabad). 9. Dr. T. S. Balasubramanian (Trichurapalli). 10. Dr. S. B. Anklesaria (Ahmedabad). 11. Dr. F. C. Shori (Amritsar). 12. Dr. R. V. Sathe (Bombay). 13. Dr. S. Samaddar (Patna). 14. Dr. P. R. Trivedi (Ahmedabad). 15. Dr. C. O. Karunakaran (Trivandrum). 16. Dr. D. G. Ojha (Jodhpur).

3. *Confirmation of the Proceedings of the last meeting of the Working Committee held at Lucknow on the 23rd December, 1954* :

The Working Committee confirmed the proceedings of the 53rd meeting held at Lucknow on 23rd December, 1954, as circulated. It was noted that these minutes had also been approved of by the Central Council at its last annual meeting held at Lucknow.

4. *Business arising out of the proceedings of the last meeting of the Working Committee* :

(1) *Spirituous Preparations Bill* :

In view of the fact that the Bombay State Branch was satisfied with the proposed uniform rates of excise for the whole country, which were to be the same as in Bombay at present, and as the Bill incorporating these rates had already been passed by the Lok Sabha, the matter was thought to have been satisfactorily dealt with and was not to be pursued further.

(2) *Coal Mines and Labour Welfare Committee* :

The Report of the Sub-Committee had not yet been received. Dr. J. Mojumdar, the Convener of the Sub-Committee reported the progress in the matter. The matter was postponed.

(3) *Licentiates and Medical Academy of Vienna* :

The Honorary General Secretary read out two letters in this connection—one of them from the Secretary of the American Medical Society, Vienna, and the other from the Director General of Health Services, Government of India. Dr. J. Mojumdar wanted this matter to be referred to the Committee discussing the handicaps suffered by the Licentiates.

Several members took part in the discussion and it was decided that it was not advisable at this stage to approach the University of Vienna in view of the fact that even the Indian Universities did not provide facilities for post-graduate training for the Licentiates. The matter was dropped.

(4) *Ban imposed by the Madhya Pradesh Government on Medical men in State employment from joining the I.M.A. or continuing as members thereof.*

Since negotiations were still going on in this matter, the President suggested that it be deferred.

(5) *Residency appointments abroad* :

The Honorary General Secretary informed the House that two circulars were issued by the Central office to the State/Territorial Branches for eliciting opinion about the usefulness of continuing the training programme in America and Canada. He informed that only two State Branches had sent replies to these circulars.

It was proposed by Dr. B. K. Vinchure and seconded by Dr. M. V. Krishna Rao to continue the training programme, and the House accepted the proposal.

(6) *Research Fellowships* :

Dr. Ved Prakash, the Hony. Asst. Secretary, informed the Working Committee about the position as regards Research Fellowships and the conditions which the Convener of the Research Fellowship Sub-Committee, Dr. A. K. Bose, wanted to lay down for the conduct of Research. This was adopted by the Working Committee.

(7) *D.T.M. Course at Tropical School of Medicine* :

A good deal of discussion took place on this matter. Dr. P. B. Mukherji, Dr. A. K. Bose, Dr. P. K. Guha and Dr. J. Mojumdar took part in the discussion. It was decided that a delegation should wait on the West Bengal Premier and that this delegation should be led by Dr. A. C. Ukil.

Some discussion took place about Dr. P. K. Guha, the Editor of the Journal, not having written an Editorial on this issue so far, which he was requested to do at the Bangalore Meeting in 1954. Much discussion took place on this matter and a vote for closure was proposed by Dr. S. M. Ghosal and was seconded by Dr. P. D. Daftry.

Dr. P. K. Guha, the Editor, explained the difficulties and the circumstances which delayed the writing of the Editorial on this subject.

Dr. S. C. Sen, the President requested Dr. Guha to write an editorial on the matter as early as possible.

(8) *Working conditions of the A.M.O.s in Tea Gardens* :

Dr. S. C. Sen, the President, explained the present position and said that negotiations were still going on and he was hopeful of the betterment of the working conditions of the A.M.O.s in Tea Gardens. The report of the Sub-Committee set up at Bangalore meeting of the Working Committee had already been approved of by the Central Council at its meeting at Lucknow.

(9) *Insurance Covers for members of the I.M.A.* :

As Dr. Sen was still pursuing the matter, it was postponed.

(10) *Letter No. 21/54-55 dated 8-10-1954 of the Madras State Branch re : suggested amendment of Part III By-law No. 55 relating to the election of the President and the Vice-Presidents.*

In view of the circular No. 20/54-55, the matter was postponed.

(11) *Resolution from Dr. T. S. Balasubramaniam suggesting a change in Bye-law No. 28-E of the I.M.A.* :

In view of the Central office circular No. 23/54-55, the matter was postponed.

(12) *Delhi Medical Laboratories Registration Bill* :

Dr. R. C. Goulatia informed the house about the effort made by the Delhi Medical Association, particularly the approach made to the Director General of Health Services.

The matter was still under the consideration of the Government.

(13) *Amendment to the Indian Medical Council Act* :

The Report of the Sub-Committee was presented by Dr. A. K. Bose.

The President wanted to know the views of the Sub-Committee on the following points :—

(1) Common Register;
(2) Schedules;
(3) Question of Reciprocity;
(4) Representation of the Licentiates on the Medical Council of India.

There was a general discussion on these points in which the following members participated :

Drs. S. C. Sen, A. K. Bose, J. Mojumdar, D. V. Venkappa, M. V. Krishna Rao, R. A. Amesur, H. N. Shivapuri, A. C. Ukil, R. C. Goulatia, A. K. Sen, R. Sankaran, P. K. Guha, V. P. Vasudevan, Ved Prakash, A. P. Mittra, P. C. Bhatia, B. K. Vinchure, P. B. Mukherji, S. D. Vohra and B. V. Mulay.

After the general discussion was over, it was proposed by the President that these points should be taken seriatim.

At this stage, Dr. J. Mojumdar, the Convener of the Sub-Committee, brought to the notice of the House the resolution on this subject which was passed at the All-India Medical Conference held at Hyderabad in 1953 and he wanted to have the ruling of the President as to whether the House was competent to deviate from the Resolution passed by the All-India Medical Conference.

After considerable discussion from the floor of the house, the President ruled that the House was competent to revise the decision of the Conference, if it so desired. He also mentioned that there were two courses open to the house : one was to send a Resolution to the authorities concerned and do nothing further : on the other hand, to send a deputation to the authorities concerned to discuss this matter and that if the authorities were not prepared to accept the Conference Resolution, to press for the acceptance of the views of the Association under different heads proposed, as far as possible. He further stressed that it might be necessary to approach not only the Minister of Health but also the individual members of the Medical Council of India and later on, if necessary, the members of the Parliament.

The points referred to above were then taken up seriatim :

1. *Common Register* :

The point under discussion was whether the Register should be in four parts as provided in the draft amendment.

After considerable discussion, the following Resolution was passed :

"Resolved that a deputation consisting of the President, the Honorary General Secretary and Dr. J. Mojumdar do wait upon the Union Minister of Health and individual members of the Medical Council of India for the acceptance of the Resolution passed

at the All-India Medical Conference held at Hyderabad in 1953, regarding one Schedule and one Register for Graduates and Licentiates qualified in India.

In case the deputation is unable to get the full implementation of this Resolution, it is authorized to accept the decision on the basis of 4 Schedules and one Register with the schedule number entered against each name registered."

Proposed by Dr. Y. P. Vasudevan (Coimbatore).
Seconded by Dr. R. A. Amesur (Bombay).
—voting being 21 in favour and 3 against.

The Convener of the Sub-Committee, Dr. J. Mojumdar, having declined to be a member of the deputation, Dr. D. V. Venkappa's name was proposed in his place and accepted.

2. *Schedules* :

After considerable discussion on the four proposed schedules, the proposal of the Sub-Committee to combine Schedule 1 and 3 was defeated, voting being 9 against and 6 in favour.

3. *Question of Reciprocity* :

While the Sub-Committee did not lay sufficient stress on this point, the House considered this of very great importance and it was of the opinion that the privileges at present enjoyed by the Graduates of recognised Universities should, in no way, be jeopardised by any change in the provisions of the Act.

4. *Representation of the Licentiates on the Medical Council of India* :

(*a*) The Sub-Committee in its recommendations had combined sub-paras (*e*) and (*f*) relating to Constitution and composition of the Council and had recommended the increase of representation from each State possessing a medical register from one to two members, without making any distinction between the Graduates and the Licentiates in the Register.

The House approved of this change by 18 against 15 votes with the addition of the following words :

"provided however that one of them is a Graduate".

5. Capt. H. N. Shivapuri proposed that no person who is eligible to contest for a seat on the Council from a medical Faculty, should be allowed to stand from the general constituency. This was carried by 15 against 13 votes.

6. It was further proposed that the Indian Medical Association should have a seat on the Council. This was carried by 18 against 5 votes.

7. It was further proposed that each State Medical Council should have a representative on the Medical Council of India. This was carried by 14 against 12 votes.

8. A question was raised by Dr. P. B. Mukherji about the State Medical Councils not being given any independence or autonomy to recognise any medical qualifications not included in the 4 schedules of this Act. He was of the opinion that the State Medical Councils should have such powers.

This question was discussed and the House was against Dr. Mukherji's proposal.

9. It was further decided by the House that the deputation be authorised to include during the discussions with the authorities concerned, to incorporate all the abovementioned decisions and to act accordingly, and to suggest consequential changes wherever necessary.

10. The attention of the House was drawn to the fact that according to the proposed amendments to the Indian Medical Council Act, there was no provision for voting rights of those Indian Nationals who possessed basic foreign qualifications only. The House agreed that this matter was also to be taken up by the deputation.

11. The question of post-graduate medical education was next discussed.

There was considerable discussion on this matter about the independence of the Universities, the possibility of co-ordination by the Inter-University Board, the creation of an independent body for Post-Graduate Medical education, or giving the powers to the Medical Council of India to control the post-graduate medical education. The House decided by 16 against 12 votes that the best solution of the problem would be to create a special standing Body of the Medical Council of India for this purpose.

12. Dr. J. Mojumdar having agreed, it was decided to add his name to the list of members of the deputation.

(14) *Handicaps suffered by the Licentiate members of the I.M.A. with regard to their postgraduate training and their service conditions* :

A meeting of the Sub-Committee "to go into the question of handicaps suffered by the Licentiate members of the I.M.A. with regard to their post-graduate training and their service conditions" was held at Calcutta on 22nd April 1955. The business had not been concluded, but the Honorary General Secretary reported to the house about the progress so far made. On the basis of this report, there was some discussion in which many members expressed their views and made suggestions.

The matter was deferred pending the final report of the Sub-Committee.

(15) *Sub-Committee on the II Five Year Plan* :

The Sub-Committee appointed with Dr. A. K. Bose (Calcutta) as the Convener, could not meet. Dr. Bose, however, informed the house what steps had so far been taken. A questionnaire had been sent to all the State Branches with an appropriate note; only three branches had replied so far. Further information and opinion from the remaining State Branches were awaited.

It was agreed that the convener would draw up a draft Memorandum with the help of the Calcutta members of the Committee and this was to be circulated to the other members of the Sub-Committee for their opinion by the end of May. The revised draft was then to be sent to the State Branches for their opinion which was to be submitted to the Convener by the end of June, so that the finalised draft could be sent to the members of the Working Committee at least one week prior to the next meeting of the Working Committee.

5. (*a*) Formation of new Local Branches.
(*b*) Revival of Branches.
(*c*) Suspension of Branches.
(*d*) Branches declared defunct.

(a) *Formation of new Local Branches* :

The Working Committee approved the formation of the following Local Branches :—

Name of Local Branch	State/Territorial Branch	No. of members	Date of formation
1. Veraval-Patan	Gujarat & Saurashtra	8	1-10-1954
2. Padra ...	Do.	6	1-10-1954
3. Mangrol ...	Do.	5	1-10-1954
4. Nangi-Batanagar	Bengal	7	1-10-1954
5. Nalbari ...	Assam	14	1-10-1954
6. Nagaur ...	Rajputana	5	1-10-1954
7. Pali (Marwar)	Do.	5	1- 4-1955
8. Supaul ...	Bihar	7	1- 4-1955
9. Saharsa ...	Do.	6	1- 4-1955
10. Raxaul ...	Do.	8	1- 4-1955

(b) *Revival of Branches* :

The following branches had been revived since the last meeting of the Working Committee :

			Date of Revival
1. Amroha ...	Uttar Pradesh	5	1-10-1954
2. Bhowali ...	Do.	4	1- 4-1955
3. Banda ...	Do.	3	1-10-1954
4. Ballia ...	Do.	11	1-10-1954
5. Adilabad ...	Hyderabad-Dn.	12	1-10-1954
6. Nalgonda ...	Do.	11	1-10-1954
8. Gulbarga ...	Do.	9	1- 4-1955

The Honorary General Secretary pointed out that some branches which had been revived after suspension seemed to bear on their rolls less than 5 members. The question was whether a suspended branch could be revived if its strength had fallen below 5.

After some discussion the House decided that such a branch could be revived and allowed to function till the end of the Association year and if its membership strength did not come up to 5 by that time, then that branch would have to be declared defunct or suspended again.

(c) *Suspension of Branches* :
Nil.

(d) *Branches declared Defunct* :
The following local branches were declared Defunct as recommended by the State/Territorial Branches concerned :

1. Itarsi-Hoshangabad under Madhya Pradesh State Branch with effect from 1-10-1954.
2. Dharangadhra under Gujrat & Saurashtra Prov. Branch with effect from 1-4-1955.

6. *Consideration of CFC, if any* :
The Honorary General Secretary reported to the House the present position regarding realization of CFC for the current year and arrears of CFC for the past two years. He requested the representatives of the State Branches to take note of arrears of their respective branches, if any. He also informed the House that the membership strength of the Association on date was 17203.
Consideration of applications for writing off CFC arrears by certain State branches was postponed.

7. *Adoption of Audited Accounts* :
(i) Central Office from 1-10-54 to 31-12-54.
(ii) Journal Dept : Do. Do.
(i) The Audited accounts of the Central Office for the year 1-10-54 to 31-12-54 were taken up for consideration, along with the auditor's remarks.
(1) *Refund of deposits to residency candidates* :
The House decided that in view of the opinion of the Honorary Legal Adviser at Delhi, the deposit of Rs. 500/- of Dr. B. K. Chakravorty (Calcutta) be refunded as a special case. The deposit of Rs. 500/- in respect of Dr. J. C. Chugh had already been refunded on legal advice.
(2) *I.M.A. Badges* :
The note on this matter by the Auditors was taken into consideration, but the house decided that before finally writing off or adjusting the amount involved, another effort be made to dispose of as many badges as possible before the end of the financial year.
(3) *Refund of Incometax* :
The Honorary General Secretary informed the house that the Exemption Certificate originally obtained from the Calcutta Incometax authorities for the Central Office had been lost during the shifting of the office from Calcutta to Delhi. The Journal Department, on behalf of the Central Office, was now trying to get a duplicate copy of the said certificate.
The audited accounts were then duly adopted as presented (Proposed by Dr. H. N. Shivapuri (Kanpur) and seconded by Dr. A. C. Ukil (Calcutta).
(ii) The audited accounts of the Journal Department for the year 1-10-54 to 31-12-54 were taken up for consideration.
The Auditors' remarks were noted.
(1) The House decided that in the case of petty purchases of the Journal Office, slips certified by the Hony. Secretary of the Journal, be accepted as "Vouchers". The limit for such "Vouchers" should not exceed Rs. 25/- in any single case. The House expected that the Auditors would accept this procedure.
(2) *Purchase of paper* :
Dr. S. N. Mukherji (Banaras) wanted to know what was the procedure for the purchase of paper for the Journal and whether tenders were invited for the supply of paper or was it indented. Dr. R. Sinha, Hony. Secretary of the Journal gave a detailed reply about the procedure. He explained that previously the paper was purchased from the local market as well as was imported through the usual agents under O.G.L. Since the O.G.L. had been abolished, the requirements were being imported under an Import License through the usual agents who were reputed and reliable firms.

Some members remarked why should not tenders for supply of paper be invited. Dr. D. P. Daftary (Bombay) at this stage explained to the house that in this sort of case, calling for quotations was a more feasible and practical procedure, since inviting of tenders was a complicated affair and lead to difficulties. Dr. R. Sinha, the Honorary Secretary of the Journal said that quotations were called from at least two large and reputed firms and added that he was willing to adopt whatever procedure the house wished. The House then decided that wherever possible, quotations should be called for, from more than two firms.
On the suggestion of Dr. R. Sankaran (Madras), it was decided that hereafter, in the quarterly accounts, the budgeted amount and the amount actually spent should be clearly shown under each item.
The audited accounts of the Journal Department for the quarter under consideration were then duly approved. Proposed by Dr. H. N. Shivapuri (Kanpur) and seconded by Dr. A. C. Ukil (Calcutta).

8. *Letter dated 24-9-54 of Dr. H. N. Shivapuri, Hony. Secretary, U. P. State Branch and letters dated 5-2-55 & 14-2-55 of Dr. B. V. Mulay protesting against the picture cards depicting objectionable Indian scenes, circulated to doctors in Germany by M/s. Ciba Wehr of Germany and letter No. 15297/p dated 24-12-54 received from M/s. Ciba Pharma Ltd., Bombay clarifying the real position, expressing regret and offering unqualified apology for the offence caused.*

The Honorary General Secretary gave a short summary of the correspondence arising out of this matter. He also read out two letters which he had received from M/s. Ciba Pharma (India) Ltd.
Some discussion followed and in view of the unqualified apology tendered by M/s. Ciba Pharma Ltd. the house decided to close the matter.

9. *Letter dated 24-1-55 of Dr. B. V. Mulay containing some comments relating to 31st All-India Medical Conference held at Lucknow in December 1954 and arrangements for dinner etc.*

Dr. B. V. Mulay's letter was read out by the President. He remarked that the letter contained some points of importance which needed proper consideration and decision.
It was decided that Dr. Mulay be requested to prepare a short note on the points of his letter which was to be circulated to the members before the next meeting of the Working Committee when it was to be discussed.

The Honorary General Secretary was requested to inform the Jaipur Branch where the next Conference was to be held, about the main points in the letter, so that the organizers of the Conference could take note of them.

10. *(a) Consideration of the Report of the Pharmaceutical Enquiry Committee, and views on it of State/Territorial Branches of the I.M.A.*
(b) Proposal by Dr. K. A. Hamid for the formation of a Medical Pharmaceutical Council.
(c) Letter from the Travancore-Cochin State Branch.
This item was postponed.

11. *Correspondence exchanged between Dr. Chamanlal M. Mehta, Bombay, the General Manager, Telephones, Bombay Distt. and the Central Office re : re-arrangement of doctors' names in the Telephone Directory :*

The President explained the various types of entries in the Telephone Directory in different places. In some cities, the doctors' names came under the general list of subscribers and in other cities, the doctors were classified in a separate category in one part of the directory. He also said that two points were involved, with regard to this question, namely, medical ethics and convenience of the public. Some members were of the opinion that grouping together of the doctors was tantamount to advertising, but others maintained that it was very convenient for the general public, particularly visitors, to get doctors of their choice from the grouped list.

Some discussion took place on this matter and the house considered that grouping together of the doctors was preferable, as it was convenient for the public.

12. *Letters dated 8-2-55, dated 2-3-55 and 5-3-55 of the Hony. Secretary, Hyderabad (Dn) State Branch and Resolution of the Doctors of Secunderabad for the formation of a separate Local Branch of the Indian Medical Association at Secunderabad.*

The House approved of the formation of a new local Branch at Secunderabad on the recommendation of the Hyderabad State Branch. The house directed that the territories of the Hyderabad Local Branch and the new Secunderabad Local Branch be defined by mutual agreement.

13. *Consideration of letter No. 1406/54-55 dated 24-2-1955 and letter No. 1702 (2)/54-55 dated 17-3-55 of the Hony. Secretary, Bengal Provincial Branch, I.M.A. re: the grievances of doctors serving in Indian Railways.*

This matter was taken up, and the President remarked whether this question of doctors serving under the Railways could be taken up in isolation in view of the general recommendations made by the Indian Medical Association for all medical and health services in the country.

The Honorary General Secretary informed the house that the recommendations of the I.M.A. on Pay, Status and Remuneration of medical personnel in services, had been sent to all departments concerned and the Union Government as well as of the State Governments. He also informed the house about the general trend of the replies received.

After discussion, the House decided that the time was not opportune for taking any further action in this matter apart from what had been done so far. It was however decided to send copies of the Recommendations once again to all the authorities concerned.

14. *Letter dated 10-2-55 of the Philippine Medical Association and Minutes of the meeting of the Asian Confederation of Medical Associations held on April 29, 1954 in Manila, requesting the Indian Medical Association to be a member of this Confederation.*

The letter from the Chairman of the Asian Confederation of Medical Associations was read out for the information of the House, wherein along with the Minutes, Constitution and Bye-laws of the Confederation, there was a request for the Indian Medical Association to become a member of the Confederation.

The House did not take any decision and deferred the matter, directing the Honorary General Secretary to convey the thanks of the Association to the Confederation, but due to financial stringency, it was not possible at present to join the Confederation.

15. *Letter dated 9-2-55 of the International Bureau against Alcoholism containing a preliminary notice of the 25th International Congress against Alcoholism to be held in Istanbul in September:*

The letter was read out and noted by the House.

The Honorary General Secretary said that a suitable reply would be given explaining that India was wedded to the policy of total prohibition. The letter was to be sent to the Editor of the Journal, for publication.

16. *Circular Letter No. 350/55 & 356A/55 of January 1955 of the World Medical Association regarding the 9th General Assembly of the World Medical Association to be held in Vienna (Austria) from September 20 to 26th, 1955, and nomination by the I.M.A. of Delegates, Alternate Delegates and Observers to attend it.*

The Honorary General Secretary informed the House that so far only one name had been received for the delegation to the next W.M.A. General Assembly at Vienna.

The House entrusted the President and the Hony. General Secretary to nominate Delegates, Alternate Delegates and Observers for the General Assembly.

17. *Letter of the World Medical Association and Proceedings of the 1st World Conference on Medical Education and the 2nd Conference on it to be held in 1959 in U.S.A.*

The letter was considered. The House noted that the Proceedings of the First World Conference on Medical Education consisted of a big volume which could not possibly be considered by the House as a whole. It, therefore, formed a Sub-Committee consisting of the following members :—

1. Dr. A. K. Bose (Calcutta)—Convener ; 2. Dr. P. K. Guha (Calcutta) ; 3. Dr. N. K. Munshi (Calcutta) ; 4. Dr. S. M. Ghosal (Patna) ; 5. Dr. A. C. Ukil (Calcutta), with powers to co-opt.

The Sub-Committee was authorized to take action and formulate its opinion on the basis of the letter from the World Medical Association and the Proceedings of the First World Conference on Medical Education. The Sub-Committee was to submit its final report within four months after which this report was to be circulated for opinion to the State/Territorial Branches and the final recommendations of the Working Committee were to be formulated by March 1956 for forwarding to the World Medical Association.

18. *Letter dated 18-2-55 of the Hony Secretary, Ceylon Medical Association Colombo, to explore the possibility of holding a joint Conference of the recognized medical associations of South East Asian Countries in Colombo in 1957.*

The letter under consideration was read out by the Honorary General Secretary.

The House was sympathetic to the idea mooted by the Ceylon Medical Association. The Association Funds however did not at present allow for any financial responsibilities. Names of Delegates could be invited, provided those willing to attend the Conference, did so at their own expense.

19. *Consideration of the Memorandum prepared by the West Bengal Branch of the Society for the Study of Industrial Medicine.*

This item was postponed till the next meeting of the Working Committee.

20. *Consideration of T.A. for Working Committee members in view of the revised nomenclature of the classes in the Railways.*

The Honorary General Secretary explained to the House how the recent change of nomenclature of classes on the Railways had affected the rule of the I.M.A. concerning T.A. for members of the Working Committee and the Central Council. The original IInd Class on the Railways had now become 1st Class, though this did not involve increase in the fares. The amenities provided in the present 1st Class were the same as in the old IInd Class, whereas the present IInd Class provided the amenities of the old Inter Class.

The Working Committee was competent according to the rules, to change the Bye-law concerned and alter the T.A. by IInd Class to T.A. by 1st Class. The House decided to circulate this proposed change of rule regarding T.A. to all branches and to discuss the matter and take a decision at the next meeting of the Working Committee in July.

The question then arose about the payment of T.A. for the current meeting. The President ruled that in view of possible audit objections, the members would draw only present IInd Class fare. If the Bye-law be changed at the next meeting of the Working Committee, it could have retrospective effect, covering the period from 1st April, 1955.

21. *To decide about the dates and venue of the next meetings of the Working Committee of the Indian Medical Association to be held in July and October, 1955.*

(1) It was decided that the next meeting of the Working Committee was to be held at Nagpur on 22nd and 23rd July, 1955. The meeting would commence at 11-00 A.M. on the first day.

(2) It was decided to accept the invitation of the Travancore-Cochin State Branch to hold the October meeting at Trivandrum on any two consecutive days of the following four dates :—
14th, 15th, 16th and 17th October, 1955, according to the convenience of the State Branch.

22. *Any other business with the permission of the President* :

(1) Letter No. PC/Prob/1/55 dated 30-3-55 from the Member-Secretary, Planning Commission, Prohibition Enquiry Committee, New Delhi, enclosing a Questionnaire on Prohibition and asking for considered views of the I.M.A. regarding this.

The Honorary General Secretary informed the House about the contents of the letter. It was decided that the Questionnaire be sent to all the State/Territorial Branches for opinion.

(2) Letter No. LSR/1282 dated 13-4-1954 from the Executive Secretary of the Indian Conference of Social Work, Bombay, Re : recommendations of the I.C.S.W. to organize a discussion on medical Social work at the ensuing Annual Session of the All-India Medical Conference.

It was decided that this information also be sent to all the State/Territorial Branches for opinion. Since the next Conference was to be held at Jaipur, the Organizing Secretary of the Conference was to be informed about this.

(3) Letter No. IMA(Mid)/14/54-55 dated 11-4-55 from the Hon. Secretary, Midnapore Branch re : association of its members with the Homoeopathic Medical College and Hospital.

The President, Dr. Sen, in a few words, explained the situation about which the Midnapore Branch in particular, had sent the letter under reference. The matter was of importance in respect of policy of the Association and it also involved the question of ethics.

It was decided to circulate the letter, inviting opinions from the State/Territorial Branches before taking this matter up again.

(4) Letter dated 14-3-55 from the American Medical Association regarding publication of report on Post-Graduate Medical Education :

This item was deferred; it was to be taken up at the next meeting of the Working Committee.

(5) Statement made by Dr. C. S. Thakar on the working of the Employees' State Insurance Scheme in Bombay :

Dr. C. S. Thakar (Bombay) made a statement which had been prepared in collaboration with Dr. Chamanlal M. Mehta (Bombay) about the present position regarding the working of the E.S.I. Scheme in Bombay, with particular reference to the difficulties experienced by the doctors on the Panel.

There was some discussion afterwards in which Dr. J. Mojumdar (Calcutta) and Dr. S. D. Vohra (Amritsar) also took part, giving short reports of the conditions obtaining in their respective States in respect of the E.S.I. Scheme. Dr. Thakar informed the House that a fuller report embodying all the points he had mentioned in his speech, would be sent to the Central Office in due course. This report was then to be forwarded to the authorities concerned of the E.S.I. Corporation at the centre for their information.

(6) Resolution from Bhimavaram Branch :

The resolution from the Bhimavaram Branch was considered. It read as follows :—

"Resolved to take in all those doctors not eligible for membership in the Indian Medical Association as non-official members of the Branch with no power to partake in official meeting."

Before discussion, the Honorary General Secretary informed the House that this Resolution had been sent to the Central Office without reference to the State Branch; it should have come through the State Branch. Hence, as it was, this was an irregular procedure, but since the matter was of importance, he had brought it to the Working Committee for quick decision for the guidance of all branches.

The decision of the Working Committee was in the negative and the resolution was rejected as the purport of the resolution was contrary to the rules of the I.M.A.

(7) Resolution from the Hyderabad Provincial Branch on the subject of College Student Health.

This resolution was read out to the House by the Honorary General Secretary and he said that it could not be circulated to the members since it reached the Central Office very late. The resolution read as follows :

"Resolved at the meeting of the Working Committee of the Provincial and Local Branches of I.M.A., Hyderabad, held on 13th April 1955 in the Association Building, Sultan Bazar, Hyderabad that this subject for College Student Health should receive our fullest attention and that whatever can be done to help this cause may be done at an early date. To achieve this, a batch of doctors who have been devoting themselves to look after the students may be deputed to U.K. and U.S.A. for a Study Tour and that the concerned Universities or the Central or Provincial Governments be moved to take necessary action immediately."

The two members from the Hyderabad State Branch, Dr. P. L. Narayan Rao and Dr. H. Syed Ali gave details in respect of the background of the Resolution. They informed the house what the doctors in Hyderabad were doing for School and College Health Services in co-operation with the Health Department of the State Government and the Corporation as well as the educational institutions including the University.

Several members took part in the discussion which followed, including the President who remarked that the I.M.A. had all along been drawing the attention of the authorities concerned with regard to the importance of the School and College health services; it had been offering its services and co-operation through its local and State Branches and as a body as well. In some places, appreciable results had been achieved through the efforts of the members of the I.M.A. What the Hyderabad State Branch was now proposing, could very well be incorporated in the recommendations for the Second Five Year Plan and these suggestions as embodied in the Resolution could be forwarded to the Sub-Committee of the I.M.A. which was to draft recommendations for the Second Five Year Plan.

With regard to the second part of the Resolution, which dealt with the matter of deputing a batch of doctors, for a study tour to the U.K. and the U.S.A., the President thought it was not necessary at this stage. He said that School and College health services in our country were still in the preliminary stage and it was not necessary for the qualified medical men to be sent abroad for training in Medical Examination of Students' Health. This could be done without any special training. However, he continued, when organization of such services had gone well ahead, only then such study tours might be advisable, in future.

The House agreed to the views of the President. According to the decision of the House, the first part of the Resolution could be considered by the Sub-Committee on the Second Five Year Plan. The Second part of the Resolution needed no action at present.

(8) Dr. S. D. Vohra's letter about a private member's Bill in the Punjab Vidhan Sabha re : registration or testing of unqualified medical practitioners.

Dr. S. D. Vohra (Amritsar) was requested by the President to give information to the House with regard to the proposed private member's Bill in the Punjab Vidhan Sabha to regularise and register medical practitioners who were not duly qualified. Dr. Vohra gave, in great detail, the purport of the Bill and its motive. He said that the Punjab State Branch of the Indian Medical

Association was taking strong action, trying to prevent the passage of this sort of Bill which was likely to prejudice the interests of the properly qualified medical practitioners of the modern scientific system. He continued to say that this Bill, if passed, was likely to lower the quality of medical service in the State and encourage quackery. This Bill, he said, was also in a way going to circumvent the powers of the legally instituted Punjab Medical Council.

After hearing Dr. Vohra's statement, the House approved of the action that the Punjab State Branch was taking. The Punjab State Branch was requested to keep the Working Committee informed about further developments.

Acknowledgments :

The following resolution was proposed from the Chair and passed unanimously :

(I) This meeting of the Working Committee of the I.M.A. places on record its deep appreciation and thanks for the hospitality and courtesy accorded to its members on the occasion of the meeting held at Calcutta on 23rd and 24th April 1955 by the

(*i*) the President and members of the Calcutta Branch of the I.M.A.

(*ii*) the Bengal State Branch of the I.M.A.

With a vote of thanks to the Chair, the meeting came to an end.

S. C. SEN,
President,
Indian Medical Association.

J. N. BAHADUR,
Honorary Joint Secretary,
Indian Medical Association.

VI MADHYA PRADESH PROVINCIAL MEDICAL CONFERENCE, AKOLA 1955

The Sixth Madhya Pradesh Provincial Medical Conference was held at Akola on the 23rd, 24th and 25th of January 1955.

The Chairman of the Reception Committee Dr. K. V. Joglekar accorded hearty welcome to guests of honour, delegates and visitors. In course of his speech, he said,

DR. G. V. PANDIT, THE PRESIDENT OF THE CONFERENCE.

"The Government of Madhya Pradesh recently issued a Communique prohibiting the doctors in government service from associating with this useful body, as if the Indian Medical Association is an anti-national political body; and so the Government doctors had to resign the membership of the I.M.A. This Conference which was scheduled in October was postponed as a token of protest against the above-mentioned Government order. Our attempts towards the withdrawal of this Order remain unsuccessful so far.

"When the time of opening more medical colleges in the States is fast approaching, our State have opened a medical school at Nagpur, which imparts inadequate medical education in a period of three years only to medical men and sends them for service in villages, as if the lives of the villagers are less valuable than those of the urban population."

Dr. Panjabrao Deshmukh, Union Minister of Agriculture inaugurated the Conference. He said, "Efficiency of medical relief of a Nation is a great essentiality in the existence of the Nation. Medical relief is quite deficient in India and more so in villages. The conduct rules both in medical and legal practice are not followed strictly in India. The medical men should be more liberal and considerate with their patients and not aspire to collect and secure too much of money. The diseases like Malaria, Leprosy and Tuberculosis are quite common in this State and the eradication of these will not be possible without healthy co-operation of the Government and the medical practitioners."

Dr. G. V. Pandit in his presidential address said, "I must express my thanks to my colleagues who for the second time, elected me for this office of the President."

GOVERNMENT'S BAN ON MEDICAL PERSONNEL IN SERVICE

"In February 1950, a letter was addressed to the Director of Health Services, Madhya Pradesh by the then President of the Provincial Branch, Dr. Chandorkar, to allow the servicemen to join our Association. In reply to this, we received a letter from the Department of Public Health in April 1954, which read as follows :—

"Government are not prepared to permit their employees to become members of the I.M.A. The proposal has accordingly been rejected by the Government.

"This was a most unexpected reply and we failed to see as to what our Association had done to deserve this unkind treatment at the hands of our own popular Government."

"We waited in deputation on the Director of Health, and the Minister of Health to have personal contact; and explain the aims and views of the Association. In reply, we were given to understand that in the opinion of the Government, the 'Code of Conduct' for Government servants, does not leave this freedom to their officers to become members of the I.M.A."

On the 8th of September 1954, Dr. S. C. Sen, the President of the I. M. A. met the Health Minister of the State, when the latter promised to reconsider the decision. In a few days, orders were issued to permit the medical personnel in service to join the ensuing Medical Conference."

"Our Association very gladly accepted the "States Employment Insurance Scheme recently started at Nagpur" but we prefer the 'Panel system' to the 'Service system' which is in vogue at present in our State.

"Very recently our State Government to safeguard its 'Prohibition Policy' have issued orders to the effect that all the Medical Practitioners should maintain a regular register showing the daily expenditure of all the spiritual drugs as the alcohol addicts had started drinking some of the tinctures to satisfy their craving. A subcommittee has been appointed to negotiate with the Government on this particular matter, as it will prove to be a great handicap for our medical practice to abide by these rules.

FAMILY PLANNING

"The vastly increasing population of the world and more particularly that our country, create a new problem of food which is already existing and so far has not been satisfactorily solved. The most satisfactory solution of this problem stands in "Family Planning" advocated and successfully practised in the Western countries. In India as well, Government has started two centres for the experimental work, which are working quite successfully.

RURAL MEDICAL AID

"The problem of medical aid to the population of villages is still unsolved and it seems it would take a very long and strenuous work on the part of the Government as well as the public. It is only possible if a team work is set up with the help of a doctor, an engineer, a social worker and a teacher. The existing conditions of sanitation in the villages, which contribute about 87 per cent of the population, are utterly disappointing. Time alone can help."

MEDICAL EDUCATION

"We made a good deal of progress in this respect but a lot of it is yet to be done. The Indian Medical Council after two years of careful deliberations, have formulated a scheme of medical education, which has been recommended to the Universities to follow. I hope the Universities would adopt and implement these recommendations without any loss of time.

OUR ASSOCIATION

"Our Association has gradually stepped in its 31st year of life and the whole credit goes to those, who in the old days, took great pains for the establishment of the Association and further its development to this stage. Our duty now, is to further the objects and wills of the Association by sincere, honest and conscientious work towards it."

Dr. R. V. Sathe of Bombay, whilst inaugurating the Scientific Session of the Conference, laid much stress on the Research Work in medicines in our country to be managed by the Government Institutions and Drugs Manufacturing Companies.

He further said that the imparting and distributing of the medical knowledge is equally important and the I. M. A. is serving its legitimate part through its different branches by periodical meetings, demonstrations, medical films and by conferences.

Dr. S. S. Kulkarni, Deputy Minister of Public Health, Madhya Pradesh, while opening the exhibition of the Conference, spoke on the preventive and the curative medicine. He said that the place of preventive medicine is very high as far as Public Health is concerned, and the medical practitioners can help a good deal in this respect, by discussing with their patients, than large scale Government propaganda.

The exhibition of medical, surgical and allied products was held in this connection. This was attended by many exhibitors and was visited by a large number of doctors and visitors.

A large number of scientific papers on important medical and surgical subjects were read and discussed during the Conference.

The following resolutions were passed in the open Session of the Conference :—

(1) This Conference places on record its deep sense of sorrow and regrets at the sad and premature demise of Dr. B. A. Vaidya of Nagpur, and expresses its sympathies and sincere condolences to the members of the bereaved family.

The Hon. Secretary M. P. State Branch I. M. A., be authorised to convey this to the members of the bereaved family.

(2) This Conference reiterates and draws the attention of the Government to the resolution passed in the meeting of the Madhya Pradesh Provincial Council I. M. A. at Yeotmal on 9-5-1954, and requests the State Government to take early steps to remove the Ban at an early date, in the interest of Medical Science.

(3) This Conference reiterated the resolution passed at the meeting of the M. P. State Council I. M. A., held at Akola, on 16-10-1954, with regard to the Regulated Tinctures. This Conference requests the State Government to so modify the orders in consultation with the State Branch I. M. A. as to avoid harassment and inconvenience to Registered Medical Practitioners, by asking them to maintain a detailed day to day account of each transaction, in dispensing these tinctures to their bonafide patients.

(4) This Conference requests the Government to start Research Centres on Indigenous System of Medicine, for assessing the merits of this system with a view to contributing proved truth to the world pool of medical knowledge.

And further recommends to the members of the profession to take active interest in this work of Scientific Nature.

(5) This 6th M. P. Provincial Conference of I. M. A. requests the M. P. State Government to start the panel system in implementing the provisions of the State Insurance Corporation Act, in our State, and decide the details about its working in consultation with the M. P. State Branch of I. M. A.

AN APPEAL

For the "Building Fund" of the Central Office of the Indian Medical Association at New Delhi.

Attempts have been made for years past to secure a suitable plot of land in New Delhi for the construction of a building of the Central Office of the Indian Medical Association and appeals were made in 1951 and subsequently to all the members of the Association to contribute generously to this Fund.

I am happy to announce that the Government of India has finally decided to allot us a plot of land measuring 0·5 acre at a concession price of Rs. 18,000/-/- plus 5 per cent ground rent. The building will have to be completed within a period of two years and will have to conform in size and pattern to neighbouring buildings.

You will recall that the Working Committee and the Central Council decided in 1950 that every member of the Association should pay a minimum donation of Rs. 50/- in one or more instalments; those who are better off are expected to pay much more.

It is proposed to have, apart from rooms necessary for the Central Office, a spacious library, one or more meeting rooms, a good sized auditorium, a decent lounge and a refectory. It is also proposed to have a few rooms for the use of members visiting Delhi for short stays either on Association work or otherwise. The total estimated expenditure will come up to Rs. 8 lacs. So far, we have received donations amounting to Rs. 16,821/4/3, some members having donated Rs. 1,001/- each. Promises to be realised amount to Rs. 2,139/-.

In view of the urgency of the situation, may I request every member and every Branch Secretary to kindly take active steps in the matter and send contributions either direct to the Central Office or through Branch Secretaries?

S. C. Sen

The 23rd June, 1955.
Dated New Delhi,

President, Indian Medical Association.

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